

Joseph Clark
Colloquia Chirurgica:

OR, THE
ART of SURGERY
EPITOMIZ'D and made EASY,
according to Modern Practice.

By Way of DIALOGUE.

WHEREIN

All Things necessary to be Known and Practis'd in the Cure of *Tumors, Ulcers, Wounds, Fractures, and Dislocations*, are concisely handled, practically and plainly apply'd; the Rules so short, that the Whole may with Ease be remember'd; and the Method so certain, that it may be always safely depended upon: Whereby every one may be able, in a very short Time, to give an Account of his Profession, without reading a Multitude of Books.

To which is added,

A COMPENDIUM of ANATOMY,

Containing, in a very few Words, the Principal Matters relating to the Structure of MAN'S BODY, and which are most necessary first to be learnt by every *Young Practitioner*, for whose Benefit the Whole is made publick. The like (for *Brevity and Method*) not Extant; and which may be of universal Use, as a Pocket-Companion, both by Sea and Land.

The FIFTH EDITION, Revised and Corrected.

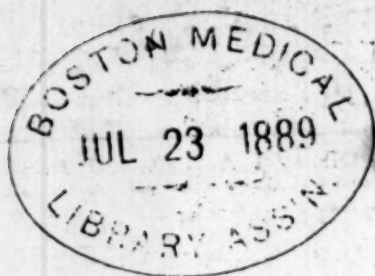
To which is added,

An APPENDIX, containing a Safe and Easy Method to cure the *Venercal Disease*.

By JAMES HANDLEY, Surgeon,
Formerly of the ROYAL NAVY.

L O N D O N:

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J. Fish
Joseph Fish's

P R E F A C E.

AFTER the general Reception this Book has met with, by the Four preceeding Editions of it, wherein several Thousands have been sold, I presume it is wholly needless to make any Apology for this Fifth, and I must crave leave to repeat two Things, which I have formerly mention'd : The one is, that this Treatise is designed principally for the Juniors in the Art ; to instruct the young Beginner, not only what to do in most Cases that can occur, but also why it is done ; that he may act upon rational Principles, and in Conversation distinguish himself from a Pretender to the Art ; and this Way of Dialogue I deem'd most proper,

*to fix Things on the Memory, as well as more delightful to the young Artist : And the Second Thing I would repeat is this, I do not hereby make any Pretence to new Discoveries in Surgery, but to explain and establish the old, in a concise and pleasant Manner, that is both Profitable and Easy to comprehend ; and which contains, the true Doctrine as well as Substance of what has been wrote on these Subjects in large Volumes formerly ; the Purchase of which is both too large for the Pocket, and too burthensome to the Memory of the young Surgeon at his first setting out : He has here Multum in parvo, without carrying a Library in his Head, or charging his Memory with superfluous Matters, and yet having the very Marrow and Substance of the best Authors that have wrote, and which I conceive will bear the Test of the most severe Examination. I do not pretend to Infallibility, but if my Doctrine may be tried by the Rules of Art, contained in the best Authors that have wrote, I am in no fear of being found guilty of Error, however some may blame me, (as I hear some have done) for Writing in this familiar plain Method ; I do not advise the young Surgeon to depend on the Rules herein laid down, without reading other Authors, far be it from me so to do ; no, I recommend diligent reading to every one, provided it be the best Authors, and to compare what they say, with what is here laid down, which will be a good Means to fix it in
the*

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the Memory, and it will be easier upon any Occasion to turn to one of these short Chapters for Information, that he may always have at Hand, than to have Recourse to larger Volumes, where a young Man too often bewilders his Understanding, instead of informing his Judgment, not being capable, on every sudden Occasion, to distinguish Truth from Error, in long Chapters with obscure Terms, and a Multitude of useless Words.

I must also inform my Reader, that the Medicines here recommended in every Case, are only for a Specimen, but not for a Standard, as if these and none else, were to be used; no doubt but others of the same Intention, may be as Effectual, but it was necessary to recommend some, to illustrate the Doctrine in each Chapter; and I cannot but think that most of (even) our best Authors, have been too large and needless, in the Medicines and Applications that they have recommended in their Writings. It is not the great Variety, but the Propriety of our Applications that we are to regard; the Art consists in knowing which to choose among great Variety, and how to vary and compound them, as Symptoms may indicate: As for Example, Very good Cures may be performed with only dry Lint, red Precipitate, and Basilicon; if the Artist knows how, when, and why to apply, mix and vary them according to Art; and he that reads this Book with

due Attention, may (I presume) be able to do that and much more. There is lately published, A Treatise of Chirurgical Operations (and has already passed Two Editions, and probably will undergo more, before this Fifth Edition of mine can appear) by Mr. Sharp, Surgeon of Guy's Hospital; I would recommend it to every young Surgeon, in which it is very demonstrable, that a Multitude of Medicines are not necessary in the most capital Operations, but the Cure may be performed by a very few, rightly adapted: And now as to this Treatise of mine, as it has met with such general Approbation in the three Kingdoms, I have not thought proper to make very many Additions to it, but let it take its Fate in its old Dress, with some little Alteration in some Places, and as I cannot attend the Press, I must bespeak the Reader's Indulgence, where he may find any Literal, or other Mistakes, to correct them with his Pen. And I must again intreat all my Readers, not only to study Anatomy in general, but the Structure of a Human Skeleton in particular; that they may be able to understand the Doctrine of Fractures and Dislocations, and not be supplanted by those ignorant Monsters that abound in the Country, call'd Bone-setters, or Bone-coblers; Do not by your Indolence and want of Application, suffer those ignorant Intruders to run away with the Profit and Reputation, of such a useful and beneficial Branch of your Art; be diligent to detect their Ignorance, and to expose their Villany,
and

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and don't suffer such Tinkers to patch up Bones, as their Brethren of the Brass-Tribe do Kettles, and who, like them, mend one Hole and make Two, and which would be more proper Work for these Vermin, than Tinkering of Bones, having naturally Heads of Lead, and Faces of Brass. Surely it is very surprising, that such Fellows are not only tolerated but dignified ! (several of them) with a Diocesan Licence, as if there were not Surgeons enough in the Kingdom, or as if Bone-setting was none of their Business, but rather belong'd to them that knew nothing at all of the Matter, and which is very surprising, the People love to have it so ; thus whilst the Spiritual Courts license them, and the People love to be cheated by them, no wonder that they proceed in their Imposture. If what is here advanced be attended to, the youngest Surgeon cannot be at a Loss what to do, in any Fracture or Dislocations, that can possibly happen, nor indeed in almost any other Case; for altho' I do not pretend to new Discoveries, I think I may say with great Truth, that for Brevity, Method, Plainness, and Comprehensiveness, it has no Superior ; the Rules short, pleasant, and easy to be remembered, by those that know any thing of the Art, and it was never designed for Pretenders, and illiterate Intruders, Quacks nor Bone-setters.

And

And as I have spent my best Days in the Royal Navy, I shall take leave to say a few Things by way of Advice to those young Gentlemen, the Surgeons Mates there: And you young Gentlemen, that are in that Station, you are (by proper Conduct) in the Road to Happiness; your Pay is very good, and I believe our Naval Encouragement to be the very best in the World: You should all hope to be Master Surgeons there, and many of you may, in due Time be such, if your Misconduct does not prevent; it will add but little to your Character, to boast that you are in the Number of the oldest Mates in the Navy; it will be much more Honour to be the Junior Master Surgeon, altho' of the smallest Ship in the Navy; and he that is always Mate, after many Years Service, must have very ill Luck, or be of the Family of the Wrongheads; for a Man of Ingenuity, Sobriety, and Spirit, seldom can fail of acquiring Friends, and in Time Preferment; and in order to it let me advise you to avoid Drinking, and keeping mean Company, for if you once do that, you lose your Character, and the Friendship of your Superiors, and of Consequence get no Preferment.

Do your Duty diligently by the Seamen; be at all Calls by Night or Day without grumbling, and give them good Words, and that's the Way for them to love you; altho' they are an unpolite

Set

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Set of Mortals, yet they are Flesh and Blood, and know when they are well used; but this you may do, without making your selves their Companions, or drinking with them; for if you do that, you lose yourself at once, not only with these Men, but (which is worse) with your Superiors: No; if you would maintain a good Character, be diligent towards the Seamen, in all Cases of Wounds or Illness, give them good Words (which cost you nothing) but do not be too much their familiar, and never their Pot Companion.

Also behave with due Respect to all your Officers, and particularly to your Surgeon, and do not think by exposing his Failings, to add a Lustre to your own Reputation, for that is not the Road to Preferment; for his good Word to your Captain, is the Way to make him your Friend, and recommend you to a Flag for Preferment; and if you are but once warranted for a Ship, you have a Title to the Navy, and a certain Number have a Sallary when out of Sea Pay, and every one may hope to be of that Number in his Turn, besides having the Benefit of Superannuation, if you serve the Time appointed for that Purpose, and have lived to a proper Age, and Infirmities render you incapable of Service; this is a Happiness worth serving for,

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for, and very well worth your Attention and Patience.

It is your Misfortune, that your Physical Practice at Sea, is much cramp'd, being confin'd to the narrow Limits of the Contents of a Chest; but do you supply that Deficiency by Diligence, Study, and a strict Observation of the Success of what your Surgeon prescribes in every Case; apply your selves to the Study of Physick as well as Surgery; read Sydenham's Works, and get Dr. Lobb's Treatise of Painful Diseases, there is a great Variety in it, and it seems a rational pretty Piece, illustrated with many remarkable Cases and Cures, and to instruct you in the Knowledge of many very useful and uncommon Things, and particularly, the Conduct of Nature in Animal Secretion and Generation, and the Manner of the Operation of a Medicine on the Fluids; I would recommend to you my Mechanical Essays on the Animal Œconomy, a Book worth your Perusal, both for Instruction and Delight; as to others, there are Plenty enough to be had, and more than are good, but you must endeavour to choose those in most Esteem by Men of Sense and Judgment, who are capable to direct you in your Choice: And lastly, Let me press you to adhere strictly to Revolutionary Principles, and take every Opportunity sincerely to shew your Attachment and Loyalty to your Sovereign, and every Branch of the Illustrious House of Hanover,

The P R E F A C E. xi

Hanover, *and delight not to be Foppish
and Singular, but neat and clean in your
Dress; and, Semper aliquid boni operis
facito, ut diabolus te semper inveniatur oc-
cupatum.*

J. H.



T H E

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Joseph Fish



JUL 23 1780
Colloquia Chirurgicalia :

ART of SURGERY

Epitomiz'd and made Easy.

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CHAP. I.

Of TUMORS in general.

Q. **W**HAT is Surgery?

A. Surgery, or Chirurgery, by its Etymology, τῆς χειρὸς ἐργον, signifies *Manual Operation*; and by the Learned in that Art, is defined to be, *The third Branch of the Curative Part of Medicine, which teacheth how sundry Diseases of the Body of Man are to be cured by Manual Operation.*

Q. How ought a Surgeon to be qualified?

A. He ought to have a reasonable Experience in all Parts of his Art; to have a competent Stock of Learning; to have an unshaken Courage, a steady Hand, a clear Sight, to be able to give a rational Account of what he does, and to be an *honest Man.*

Q. What

Of TUMORS in general.

Q. *What is a Tumor?*

A. It is a Disease, for the most part, incident to the *Organical Parts*, increasing their Quantity above Nature, by reason of receiving superfluous Humours, sent from other Parts.

Q. *How are those Humours received?*

A. By *Affluxion* or *Congestion*.

Q. *What is Affluxion?*

A. It is when an *Humour* offending, either in Quantity or Quality, suddenly and with Violence, seizeth upon any Member, either by reason of its Weakness, Rarity, Looseness, Dependency, Heat or Pain, or because the whole Body is full, and the Parts sending, strong.

Q. *What is Congestion?*

A. That is when an *Humour* is collected in any Part, by little and little, by reason of the Weakness of the concocting and expelling Faculty of the same.

Q. *What do you mean by an Organical Part?*

A. Chiefly a *Muscle*; in which are a *Membrane*, *Flesh*, *Tendon*, &c. Also a *Nerve*, which conveys the animal Spirits, and distributes them; and the *Arteries*, which do the same by the Blood.

Q. *What are the Denominations of a Tumor?*

A. In Greek it is called *ὄγκος*; that is, a *Protuberance* in the Body: The *Arabians* and their barbarous Followers call all Tumors *Apostemata*; in Latin *Abcessus*. All Tumors, wherein is a Collection of Matter we call *Apostems*. The Word *Tumor* is a Latin Word, and is derived from the Word *Tumeo*, to be raised or puffed up.

Q. *What are the Causes of Tumors?*

A. Surgeons reckon up eight *External Causes*, (*viz.*) 1. A contagious Air in time of the Plague. 2. Things exceeding Temperature in the active Qualities; as, *Vesicatories*, sitting long on a cold Stone,

Stone, &c. 3. When too hard Ligature is made upon a Part. 4. The Application of Cupping-glasses. 5. A Wound, Fracture, Luxation and Contusion. 6. Biting of any Beast. 7. By taking Things inwardly offensive to Nature. 8. Immoderate Motion, whereby immoderate Heat is produced, and the Humours become more subtil.

Q. *What are the Internal Causes?*

A. Either *Humours* or *Flatuosities*.

Q. *What are the Humours?*

A. Either Natural or Unnatural, and they again either *Sincere* or *Mingled*.

Q. *Which are those which you call Sincere?*

A. *Choler*, *Phlegm*, and *Melancholly*.

A. *Which do you call Mingled?*

A. When one of the former is mingled with the Blood; (for Blood is no where *Sincere*, but according to the Humour mingled with it, which is predominant) it is called *Cholerick*, *Phlegmatick*, *Melancholly* Blood.

Q. *What are the Unnatural Humours?*

A. *Water*, as in the *Dropsey*, &c.

Q. *What other Distinctions have you?*

A. *Simple* and *Compound*.

Q. *What do you call a Simple Tumor?*

A. If it proceed from Blood, (tho' it be never unmixed) it is called *Phlegmone*, or *Inflammatio*; if from *Choler*, *Erisipelas* and *Herpes*: All which are hot Tumors. Of *Phlegm*, is an *Oedema*; of a *Melancholly* Juice, is a *Schirrus*: And these two are cold Tumors. If from *Atra Bilis*, *Cancer*; if from *Water*, it is called *Tumor Aquosus*; and particularly from hence come *Hernia Aquosa*, *Hydrops*, *Hydrocephalus*, &c. If from *Flatuosity*, it is called *Emphysema*: And these are caused by the defect of the natural Heat.

Q. *What do you call Compound Tumors?*

A. When

A Of the Indications of TUMORS.

A. When there is a Combination of these, they beget a Compound Tumor, and what Humour most predominates, carries away the Name; as *Phlegmonodes*, *Erisipelatodes*; and so of the rest.



C H A P. II.

Of the general Indications of Cure in
TUMORS.

Q. **W**HAT is an Indication?

A. It is that which sheweth what Course is to be taken for the *Recovery of Health*.

Q. From whence are the general Indications taken?

A. Either from the Matter, or Times of every Tumor.

Q. As how?

A. In the Matter, we are to observe the Motion of it, and its Nature; as concerning its Motion, it is either in flowing, or is already received into the Part.

Q. What are the Causes of Fluxion?

A. Two; (*viz.*) *Plethora*, or Fulness; and *Cacochymia*, or an ill Habit. *Plethora* is of two sorts, *ad vasa*, and *ad vires*.

Q. What do you understand by that?

A. *Ad vasa*, is when the Veins are only full, and the Body nevertheless quick and nimble: And that it is again (1) pure, when there is a due Proportion of the Humours of the Body; and (2) impure, when there is an Excess of any of the three Humours, besides Blood; as *Phlegm*, *Choler*, and *Melancholly*. *Ad vires*, is when there is such a Fulness as causeth a Lassitude of the whole Body.

Q. What must be done in this Case?

A. Ple-

Of the Indications of TUMORS. 5

A. Plethora, requires *Phlebotomy*; and *Cachexia*, Purging; both which are to be done according to the Strength of the Patient.

Q. How do you discern Strength and Weakness?

A. By the Functions, thus: The Weakness of the *Natural Faculty* is discerned by Crudity of Urine, and Excrements of the Body; the Weakness of the *Vital Faculty*, by a weak Pulse, and by breathing weak and sick; and the Weakness of the *Animal Faculty*, is found out by Defect in Moving and Feeling.

Q. What are the Ends of Phlebotomy?

A. Derivation and Revulsion.

Q. What are they?

A. Derivation, is a drawing of the Humour to the Part adjacent, or of the same side, by opening a Vein, or a Branch of it, which is inserted into the Part affected. *Revulsion*, is a drawing of the Humour to the opposite Part, as from the Head to the Feet, from the right Side to the left, &c.

Q. What more will you do, to prevent, or abate Fluxion?

A. Since a hot Distemperature is most commonly the Cause, we must apply Things cooling; as Cloths moistened in *Ol. Rosar.* or *Violar.* laid on cold, and renew them as they grow hot; or apply *Unguent. Rosat. de Cerussa, Populeon, &c.* between two Cloths.

Q. Why between two Cloths?

A. It thereby keeps the *Unguent* from drying, and doth not hinder the perspiring of Vapours, which it otherwise would do, and thereby increase both Pain and Heat: The same we are to do also when we apply *Cataplasms* to this Purpose.

Q. But what if the Ways by which the Tumor passeth be too large, and a hot Distemperature joined, how will you proceed then?

A. Then

6 Of the Indications of TUMORS.

A. Then Things astringent and cooling are to be applied, Rollers and Cloths being moistened in them: *As, Bacc. Myrtil. Fol. Ros. Rub. Sicc. Cort. Granat. Balauft. Sumach. Cort. Querci, &c. Coq. in Vin. Rub. vel Aceto, & Aq. Font.* And the Parts by which the Humours pass, are to be rolled pretty strait with Rollers dipped in the same.

Q. But suppose the Tumor be painful?

A. Then I use *Anodynes* or *Narcoticks*.

Q. What are *Anodynes*?

A. They gently *Contemperate* the Part, by reason of the Conformity which they have to the Nature of Man; are hot in the first Degree, and are of subtil Parts: *As, Lac, ol. olivar. vet. axung. porcin. adeps humani, anseris, gallin. ursi, Ol. Cham. lilior. lumbricor. lini, amygd. dulc. ovor. ol. Rosar. pul. Croci, &c.* Or make this *Cataplasm*; *R. Fol. visc. pomorum cum fructibus, ana Mj. Fol. Hyosciami Mij. Fol. papaveris Mj. sub cineribus coquantur, addendo tandem Mic. panis in lacte tepido macerati, vitell. ovor. N° ij. pulv. Croci 3j. ol. Cham. & Rosar. ana q. s. fiat Cataplasm. S. A.*

Q. What are *Narcoticks*?

A. They deprive the Part of the *Faculty of Feeling*: And such are, *Opium, Hemlock, Night-shade, &c.* These are to be used when the former will not prevail. Sometimes (but seldom) they are used alone, and sometimes with Things hot, if we fear *Stupefaction* of the Part unto which they are to be applied.

Q. Suppose the Tumor proceeds from the Bite or Sting of a venomous Beast?

A. (1.) Then the Part is to be immediately scarried, and Cupping-Glasses to be applied; and then the Part is to be fomented, *cum Aceto & Ther. Ven.* and a *Cataplasm ex Ther. Ven.* applied over all. The Member is to be bound hard two

or

Of the Indications of TUMORS. 7

or three Inches above the Bite or Sting; and *Ther. Ven. cum Sal. viperar.* to be given inwardly three times a Day: Or, *R. Fol. Rutæ contus. ℥vj. alliū contus. Ther. Ven. vel Mithridat. & Rasuræ Jovis, ana ℥iv. coq. super lento igne, in Cerevis. fortif. ℔iv. ad ℔iij. & Colat. &c.*

Keep it in a Bottle close stopt; the Dose is 9 or 10 Spoonfuls, seven Mornings fasting, warm, as soon as possible after the Bite; and apply some of the Ingredients to it daily, warm. *Vid. Pharm. Bat.*

Q. *What do you understand by the Times of a Tumor?*

A. I understand the *Beginning*, the *Increase*, the *State*, and the *Declination*.

Q. *What do you call the Beginning of a Tumor?*

A. The Beginning I take to be, when a Part begins to tumify.

Q. *What Medicines are then most proper?*

A. Repelling Medicines, which are cold, and of a gross Substance, to thicken the Part affected, and to cool the inner Parts of it: And such are, *Alb. ovor. plantag. semper-viv. solan. petroselin. fol. Ros. rub. Bacc. Myrtill. Cort. granat. Galliæ, sang. Drac. Ter. sigillat. Acet. &c.*

Q. *Are you to use repelling Medicines in all Cases?*

A. No: As, (1.) If the Matter be Venomous or Malignant, lest being repell'd it assault some principal Part. (2.) If the Matter be critically turned to a Part. (3.) If a *Plethora* abounds. (4.) When the Humour floweth to the Emunctories. (5.) If the Part have but little natural Heat, lest it mortify. (6.) If the Pain be very great; for then only *Anodynes* are to be used.

Q. *What do you call the Increase of a Tumor?*

A. When the Part is stretched, and Symptoms increased.

Q. *What is Discussion?*

A. It

8 Of the Indications of TUMORS.

A. It is an Evacuation of a thin Matter, (gathered in a Part) by insensible Perspiration, procured by the natural Heat, increased by proportionate Medicines, &c.

Q. What do discutive Medicines effect?

A. They help natural Heat; which being done, (1.) The Humour is made thin. (2.) It is resolved into Vapour. (3.) It is drawn from the Center to the Circumference. (4.) It is expell'd by the Pores of the Skin: Wherefore they must be familiar to Nature, and such as perform their Office by consuming superfluous Humidity, and must be hot and dry.

Q. How many Degrees of discutive Medicines are there?

A. Three: viz. (1.) Those that are hot and dry in the second Degree: As, *Fic. Chamb. Galb. Rad. Lilior. Melilot. Adeps anseris, Altheæ, &c.* and because such ease Pain, we should ever begin with them. (2.) Those that are something more hot and dry: As, *Calamint. Puleg. Hyssop. Mentb. Sem. Cymin. Anethi, farin. fabar. & sænugrec. adeps Uræ & Can. vet. &c.* (3.) Those that are dry in the third Degree; as Nitre, unslaked Lime, Sulph. viv. &c. If the Tumor is hard, forbear Repellents, and use Discutients and Emollients: R̄ *Rad. & Fol. Altheæ, ana Mj. Sem. lini & sænugrec. ana ʒvj. pulv. flor. Cham. & Melilot. ana ʒij. far. Hord. & Tritici ana ʒvj. fiat Cataplasma. addendo Mel. Com. ʒij. Ol. Sambuc. & Axung. anseris ana ʒj.*

Q. What do you call the State of a Tumor?

A. When it is come to such a Degree as it can grow no bigger.

Q. How do you know when that is?

A. All Symptoms are at their height, when neither increasing, nor decreasing.

Q. What will you do then?

A. Use

Of Curing TUMORS, &c. 9

A. Use Anodynes with Discutients, by reason of Pain.

Q. How will you know when the Tumor declines?

A. When the Symptoms begin to abate.

Q. What must be done then?

A. I must then use strong *Discussives*, as before spoken of; or, in case of Necessity, *Diach. cum gum. Diach. Ireat. &c.*

Q. How do Tumors end?

A. By Resolution, Maturation, Induration, and Corruption; and as Discussion is better than Suppuration, so Induration is better than the Corruption of the Part.



C H A P. III.

Of Curing TUMORS, in general, come to Suppuration.

Q. Suppose you cannot discuss a Tumor, what will you do then?

A. Bring it to Suppuration, or Maturation, vulgarly called *Apostemation*; and that is, when the impacted Blood, or Humour, is converted into laudable Matter.

Q. How is this done?

A. By outward Applications laid on warm, which working upon the superfluous Humidity, causeth Putrefaction.

Q. But suppose it attended with Pain, would you not use Narcoticks?

A. No, for they extinguish the natural Heat of the Part, which is the principal Cause of Coction; they also thicken the Matter, and make it more rebellious; but instead of them I use *Anodynes*, which we spoke to before.

Q. But what if Hardness possess the Part?

A. Then I use Emollients.

Q. What are they?

A. All Fats: Omn. spec. Malv. tussilag. sem Cydonior. lill. alb. sem. lini. fic. Uvar. pass. Medul. Omn. Ammoniacum, Bdellium, &c. of which Cataplasms may be framed.

Q. But if immoderate Heat trouble the Part, what must be done?

A. I must use Things cooling in the second Degree; as, Umbilic. Veneris, semper-viv. lil. aquatic. plantag. farin. Hord. &c.

Q. But when these Accidents are removed, what then?

A. Then I proceed to assist Nature, by increasing Natural Heat, by suppurating Medicines which ought to be such as moderately stop the Pores, only suffering the sharp Vapours to breathe out, and to detain those which are mild and thick.

Q. What suppurative Medicines do you use?

*A. Of suppurative Medicines there are two ranks: Of the first, is Adeps humani, anseris, gal-
lin. Butyr. Ol. olivar. fic. sem. lini & scænugrec. Malv.
farin. tritici. rad. lill. alb. &c. Of the second sort
are, Gum. Galban. Ammoniac. Elemi, pix Burgund. &
Naval. Croci, Cæpe tost. ol. Cham. adeps Can. & Ursi,
Empl. è Mucilagibus, Diach. cum gumm. &c. of
which Suppuratives may be framed at pleasure:
Or (for Example) R Rad. Lilior. alb. ℥iij. cæpar.
coct. sub cineribus ℥ij. summit. altheæ Mij. fic. ping.
tost. N° vj. coq. & contus. adde far. tritici ℥ij. pulv.
sem. lini ℥j. axung. porcin. ℥ij. ol. Lilior. q. s. cum
vitel. ovor. N° ij. Croci ʒss. fiat Cataplasma.*

Q. How do you know when a Tumor is come to full Maturation?

A. (1.) The Tumor by contracting it self, seems less than it was in the State. (2.) It draws it

itself to a Point. (3.) Hardness and Tension are much abated. (4.) By pressing with the Finger, we may feel the Matter fluctuate. (5.) The Patient feels much Ease. (6.) The Heat ceaseth. (7.) The inflamed Part (especially at the Point) will become white. (8.) The *Cuticula* will be shrivell'd.

Q. Why should Contraction be a Sign of Suppuration?

A. Because whilst natural Heat concocts the Matter, Vapours are raised by the Heat, and so the Part is distended; but when the Matter is concocted, the Elevation of Vapours cease, and the Tumor a little falls.

Q. Why should drawing to a Point be a Sign?

A. Because when Nature overcomes the Matter, it draws it together to the Skin, and having conquer'd her Enemy, expels him.

Q. Why should the Abatement of Hardness and Tension be a Sign?

A. Because Suppuration being procured, many Vapours are dissipated, which before stretched the Skin, and made it hard.

Q. Why should the Patient's Ease be a Sign?

A. Because the sharp Vapours are resolved, and the Matter being well concocted, makes the Parts more loose.

Q. How will you open an Apostem come to full Maturation?

A. Two ways. (1.) By Incision. (2.) By the Potential Cautery.

Q. Which do you esteem the best?

A. The Potential Cautery gives the most large and certain Discharge; but in Apostems of the Face, they are to be shunned, because of the Scars they leave behind them: but in other Places I use them, in large Tumors, or to gratify

B

timorous

timorous Patients, who will not admit of Incision.

Q. What is the Potential Cautery compos'd of?

A. Soap-Lees, and unslaked Lime, mixed to the Consistence of an Unguent; or black Soap and unslaked Lime so mixed. Of a stronger sort, and which must be used with great Caution, are *Lapis infernalis*, (mixed one third, fourth or fifth Part with black Soap, and laid on) and the Silver Caustick, &c. But either of these being used in the form of an Unguent, must be spread upon a Pledget of Lint, and laid upon the most soft and depending Part of the Tumor, with a Plaister of Diapalma (or some such) all round it, to keep it from spreading; which it will do, less or more, tho' we do all we can to prevent it, therefore the Pledget must be made but small.

Q. How long is the Caustick to lie on?

A. I allow for the common milder sort twelve Hours; for the strong, not so much. If you apply the Silver Caustick, hold one end of it between your Fingers, covered with a Rag; and having just wet the other end, apply it to the Part, holding it on close, now and then wetting it afresh, and in a little time you will have an Eschar. By doing this on a particular Occasion to a sound Part, and managing it thus for three Hours, I have made an Eschar without Pain; which, when it has been divided, digested and separated, has left a Cavity big enough to turn the end of one's Thumb in, and an Inch deep. I only hint this, to shew what may be done, with prudent Management.

Q. What are you to consider when you come to open an Apostem?

A. I am to be careful to shun *Veins*, *Arteries*, *Nerves*, and *Tendons*; if the Skin is only to be divided,

divided, the Incision is to be made *strait*; but a Muscle is to be cut according to its *Fibres*; and it must be opened in a depending Part, because of giving a free Discharge to the Matter, which would otherwise be kept in, and insinuate itself deeper. It must also be divided where the Part is thinnest, to avoid Pain; the Apertion must be proportionate to the Tumor, and the Discharge according to Reason; not too much at once, for fear of weakening the Patient too much.

Q. What Accidents follow the opening an Apostem?

A. Fainting, Pain, and a Flux of Blood.

Q. How are these to be remedied?

A. In case of Faintings, give Cordials or Wine; if Pain, imbrocate with *Ol. Rosar. &c.* and as for the Flux of Blood, it is to be stopped with *Bol. Sang. Drac. alb. ovor. acet. &c.* mixed and applied on Tents and Pledgets, with good Boulsters and Bandage over all, &c. and so let it remain 24 Hours.

Q. How will you dress it after opening, if there is no Flux of Blood?

A. If I find that the Potential Cautey has done its Business, by making an Eschar, I take off the Caustick, wash out the Salts with warm Milk or Water, divide the Eschar, and dress it with warm Basilicon, or some other Digestive, till it falls off.

Q. What must be done then?

A. Dress it with Basilicon alone, or mixed with *Merc. præcipit. Rub.* or dipt in *Spir. vin.* and sometimes if there is much Putrefaction, inject *Spir. vin. per se*, or mixed *cum mel. Rosar.* as I see occasion: and if it be very hollow round about, be sure to dilate it by Incision, or cut off the Lips, if they grow callous, &c. After it is well digested, IMundify, Incarn, and Cicatrize.

Q. How do you know when it is well digested?

B 2

A. When

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A. When the Matter is *thick, white, sweet, even,* and less than it was, and the Part looks clean.

Q. *How will you Mundify, or Deterge?*

A. Many Surgeons have many Methods; the most common way is with *Ung. Apostolor. Ung. Basilic. & præcipit. rub. or tereb. Ven. mel. Rosar. Sarcocol. Myrrh. Rad. Aristol. Rot. Mundificativ. Paracels. ex apio, &c.*

Q. *With what will you Incarn?*

A. With *Liniment. Arcæi, Gum Elemi, &c.* and sometimes I use Digestives and Incarnatives together, as the Occasion requires.

Q. *How do you know when it is fit to Incarn?*

A. When the Part is *very clean,* and has *little red granulated Spots* appearing in it, and a small Discharge of Matter from it.

Q. *When is the time to Cicatrize?*

A. When the Ulcer is *almost incarned* even with the *Cutis*; not sooner, lest it should heal with a *Cavity*; nor later, lest a *deformed Scar* is produced.

Q. *With what will you Cicatrize?*

A. With *Unguent. Desicc. Rub. Aq. Calcis,* or dry Lint, prepar'd out of fine Cloth, dipt in a Dissolution of *Vit. Rom.* in Water, and dried, or *Liniment. Arcæi,* washed in *Aq. Calcis, &c.*

Q. *What if a Fungus, Hyperfarcosis, or spongy proud Flesh arises?*

A. I take it off with *Merc. præcipit. Rub. Allum. ust. vit. rom.* and sometimes by the Knife, &c. and in some rebellious Cases, by the actual Cautey.





C H A P. IV.

Of a PHLEGMON, *showing the general Method of its Cure.*

WHAT is a Phlegmon?

A. It is a hot Tumor, proceeding from the *Affluxion* of Blood to any Part.

Q. From whence is the Name derived?

A. Φλεγμονή is derived from φλέγω, from whence *flagro*, to burn, by reason of its heat.

Q. What is the true Cause of a Phlegmon?

A. It is caused by good Blood offending in quantity.

Q. What are the true Signs of it?

A. It suddenly begins, and speedily increaseth; it is very hot, of a fresh Colour, is attended with great Pain, Pulsation, Tension, and the Viens are often very apparent, black, or ruddy.

Q. What are its Differences?

A. If it seize upon the *Meninges* of the Brain, it is called *Phrenitis*; if on the *Conjunctiva* of the Eye, *Ophthalmia*; if on the Muscles of the Throat, *Angina*, or *Quinzy*; if on the *Pleura*, *Pluritis*, or *Pleurisy*; if on the Lungs, *Peripneumonia*; if on the Emunctory of the Heart and Liver, *Bubo*; if under the Ear, *Parotis*: otherwise it carries the general Name of *Phlegmon*.

Q. What are (in short) the Means of a Cure?

A. They are two: (*viz.*) *A fit Diet*, and *proper Applications*. In the beginning I order a thin and cooling Diet, and only what is sufficient to support Nature; as, *Chicken* or *Veal-broth*, *Water-*

gruel, cooling Salads, Barley-broth, Spinage, Sorrel, Purslain, &c. His Drink, Small-Beer, Barley-water made palatable with Syr. *Violar.* or Syr. *Sacchari*, and such like: He must forbear *Wine*, Eggs, *Flesh*, Spices, *Stale-Beer* and *Ale*, &c.

Q. Suppose the Humour flows immoderately, how will you abate it?

A. By Phlebotomy and Purgation.

Q. What are you to consider in Phlebotomy?

A. The Season of the Year, and Age and Strength of the Patient.

Q. Why is Purgation of use here, since no Blood (which is the Matter of a Phlegmon) can be spent that way?

A. Catharticks or Purgatives, dry the Body and deprive the Blood of Moisture, and make it more unapt to flow; and by purging out sharp Humours, which irritate the Part affected, the Enemy is conquered with more Ease.

Q. What Catharticks do you use in this Case?

A. Lenitives, as *Cassia*, *Tamarind*. *Elect.* *Lenitiv.* &c.

Q. What else is to be done?

A. Discussives, (of which I gave an Account before) Defensatives and Repellers.

Q. What do you call Defensatives?

A. These are such as by their astringent Nature, purse in, and contract the Vessels, thereby hindering the Humour from flowing to the Part, and are in Nature cold and dry.

Q. Where must they be applied?

A. To the Parts contiguous, to the Joints and Parts above them.

Q. Why so?

A. Because there the Vessels are more plain and conspicuous, and so apt to receive Impression from the Medicine.

Q. What

Q. What are your defensive Medicaments?

A. The more mild are, *Succ. Plantag. Ros. Alb. Nigell. Papav. Rhead. Aq. Sperm. Ranar. Vin. Rub. Acet. Oxileum, &c.* Cloths being dipped in them, and applied, and often renewed; or the common Defensative of *Diapalma* and *Bole*, spread upon Cloth or Leather.

Q. What is Oxileum?

A. *Acetum & Ol. Olivæ. commixt.* The more strong Defensives are, *Bol. ver. Sang. Draconis, Ter. sigillat. Ol. Myrtillor. Mastic. Albumin. Ovor. &c.*

Q. What are Repellers?

A. Such Medicines as drive back the Humour from the Part.

Q. What are they?

A. Some are mild, being cold and moist, as *Lactuc. Cichoreum, Portulac. Alb. Ovor. Nigell. &c.* And some are more strongly cooling, as *Cicut. Mandragor. &c.* Again, some are more astringent, cooling and drying, and repel more strongly than the others. Of these some are weak, as, *Fol. Plantag. Fol. Ros. Rub. &c.* And others are more strong, as, *Bol. Cort. Granat. Vin. Rub. Allum. Gallia, &c.* All which may be made into Cataplasms, with *Far. Hord. &c.* Or thus, *R Far. Hord. ʒvj. Pulv. Cort. Granat. ʒij. Pulv. Balauſt. ʒss. Succ. Sedi Major. ʒiij. Vin. Rub. q. s. Coq. ad consist. Cataplasma. & in fine Coctionis adde Ol. Myrt. ʒij.*

Q. When are these to be applied?

A. In the beginning of the Tumor, and so long as I see any good Effect from them.

Q. What Mischief comes of their untimely Application.

A. They wrinkle the Skin, increase the Pain, harden the Humour in the Part, and often return it to some Noble and Principal Part.

Q. How do you know when Repellers are to be applied?

A. They are to be applied if the Patient comes whilst the Blood is yet in the small Veins; because then the Humour is but little and thin; Nature is strong, and the Matter is not yet settled: And as I see Occasion, I sometimes apply *Repellers* and *Discussives* together.

Q. In what Cases are repelling Medicines not to be used?

A. (1.) If the Part be weak, lest its natural Heat be extinguished. (2.) When there is great Pain; because they would cause greater. (3.) When the Fluxion is violent; for then they would be fruitless.

Q. Tell me (in short) how you will manage it, from first to last?

A. In the Increase of a *Phlegmon*, I use repelling Medicines, and sometimes with discussing; because until the latter end of the Increase, there is hopes that the Matter may be repell'd; but when the Blood is once slipt out of the Veins, and the *Phlegmon* begins to abate, I immediately fly to *Discussives*, which make the Blood thin and apt to flow, convert it into Vapours, and evacuate it by the Pores of the Skin: And if, notwithstanding all this, there be Tension or Swelling, then I endeavour to procure Suppuration.

Q. How is Matter produced?

A. By a natural and unnatural Heat encountering together.

Q. Why is it termed Good, if it be White?

A. Because that shews it to be produced of natural Heat, and is caused to be white by the Coats of the Veins, Arteries, Nerves and Membranes, which are in Colour white, and turns the Matter into the same Colour.



C H A P. V.

Of an ERYSIPELAS.

Q. **W**HAT is an Erysipelas ?

A. It is a hot Tumor, proceeding from Choler, of a bright red Colour, tending to yellow, without Pulsation or circumscribed Tumor.

Q. Is Choler always yellow ?

A. For the most part, and in a healthful State it is ; but in a *Morbose State* it is often of several other Colours, as pale, black, *eruginous*, reddish, vitelline, &c.

Q. Why do you call this Tumor *ερυσίπelas* ?

A. From *ερυον* (which the Ancients used to signify Red) and *πίλας*, signifying near. So that it is a Tumor in Colour coming near to Red.

Q. What are the Signs of it ?

A. Great Pain and Heat ; the Colour of it of a bright red, tending to yellow ; it is small, possessing only the Skin, and is attended with a Fever.

Q. What is the Difference between a Phlegmon and an Erysipelas ?

A. A *Phlegmon* possesseth the Skin and Flesh under it ; an *Erysipelas* only the Skin ; a *Phlegmon* is of a dark red Colour, by reason of thick Blood lying deep ; but an *Erysipelas* is of a bright red, tending to yellow ; a *Phlegmon* setteth it self in one Part, but an *Erysipelas* makes red the adjacent Parts by spreading ; a *Phlegmon* comes of Blood, an *Erysipelas* of Choler, in which the Heat and symptomatick Fever is greater than in a *Phlegmon* also.

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Q. What Prognosticks are you able to make ?

A. That which proceeds from natural yellow Choler is mildest ; if it be driven to the outward Parts, it is a good Sign ; so it is bad (on the contrary) if it return from the outward Parts inward : it is more dangerous in the Head than in other Parts : If it appear in Wounds, Fractures, Ulcers, &c. it is very often mortal, if it does not proceed from Application of too hot Medicines. If it tends to Suppuration, or if a Bone be bare, and the adjacent fleshy Parts be possess'd with it, it is an ill Sign.

Q. How is a Patient to be relieved that labours under it ?

A. By Diet, Surgery, internal Medicines, and external Applications.

Q. How is he to be dieted ?

A. It must be cooling and moistening ; Chicken-Broths with cooling Herbs, Oatmeal-Gruel, *Panada*, Spinage, Sorrel, Lettice, &c. His Drink, *Aq. Hordei*, Spring-Water, or Small-Beer. The Season of the Year must be consider'd, Sleep procur'd, and all Disturbances of Mind shunn'd, &c.

Q. Is Phlebotomy to be used ?

A. It is disputable : Yet in an *Erysipelas Phlegmonodes*, wherein Blood increaseth the Heat, in what Part of the Body soever it be, a Vein is to be bled without doubt ; as also if it invade the Head, Neck, or Face, lest a *Phrenitis* or *Angina* follow : But in all other Places they tell us, not ; because by *Phlebotomy* the Blood which remains, moves more quick, and becomes more subtil, that which is the Qualifier of Choler is taken away, and the Patient weakened.

Q. What are your internal Medicines in an Erysipelas ?

A. I

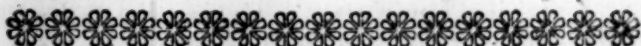
A. I give Lenitives, as *Cassia, Elect. Lenitivo. Diacatholic. Elect. & succo Rosar. Tamarind. Crem. Tart. Manna, &c.* And if the Inflammation be mild, Glisters made of the Decoction of cooling Herbs, with the aforesaid Electuaries, may serve.

Q. What are your external Applications ?

A. In these I must be cautious, not to apply astringent Medicines, which are cooling and drying, because the Vapours in this Tumor are sharp; and if they should be pent in, they might erode and corrupt the Part: The Medicines then must be cold and moist, but not Narcotick, unless the Pain be extreme, and the Grief far from any principal Part, and unctuous Medicines stop the Pores: But I use Cloths dipt in *Aq. vel Succ. Umbell. Veneris, Equiset. Plantag. Lactuc. Petroselin. Papav. &c.* mixed with *Acetum.* Also, *Cerat. Refrig. Galeni, Sapo Castil. dissolv. in Aq. Fontan. Aq. Sperm. Ranar. cum Aceto ex Vin. Rub.* wherein some Myrrh has been dissolved. Also foment the Part with *Decoct. Salviæ cum sapone Castil.* (which I have often used with great Success) and bathe it with *S. V. Camphorat.* And here all Medicines must be often changed, and cut the Vefications as oft as they rise.

Q. How long are these to be applied ?

A. Till the Heat be abated, and the Skin recovers its Colour; for by using cooling Medicines too long, Lividness of the Skin, and sometimes a Mortification is procured. If it be in the Head or Face, be very cautious in your Applications, and let them be rather Exsiccant than Repellent, till the Humour has spent it self; Abstinence and a cooling Regimen being here the best Method. And some use no local Applications at all, but leave it to Nature; but I cannot approve of such a Conduct, especially where the Part is raw, &c.



CHAP. VI.

Of an OEDEMA.

Q. **W**HAT is an Oedema?

A. It is a soft, loose, white, cold Tumor, caused of Phlegm; which, if press'd with the Finger, pits; and is commonly without Pain.

Q. What is Phlegm?

A. It is the fourth Part of the Mass of Blood, cold and moist, and is either *natural* or *excrementitious*. The natural is void of any foreign Taste, and ought rather to be called *pituitous Blood*, than *Phlegm*. Of the excrementitious or unnatural, there are three Sorts; (1.) Sour. (2.) Salt. (3.) That which shews like melted Glas; and is therefore called *Pituita*, *Vitrea*, &c.

Q. What is the Signification of the Word Oedema?

A. The Greeks call it, οἰδημα, the Latins *Oedema*, and (to speak in a general way) is the same with ὄγκος, which signifies *bunching out*; and so every Tumor may be called an *Oedema*: but in a more strict Sense, and according to modern Writers, it is taken for this particular Tumor caused of Phlegm.

Q. What Prognosticks can you make relating to it?

A. It is commonly a continuing Disease, because the natural Heat in the Part it affects, is weak; but it is not of itself dangerous, because it is mostly without Pain; but in consumptive and dropical Habits, it is of ill Consequence; not as it is a Disease, but as it shews the Decay of the natural Heat.

Q. How

Q. *How will you perform its Cure?*

A. It is performed by Diet, internal Medicines, and local Applications.

Q. *What Diet would you advise your Patient to?*

A. Always to that which is drying, and to that which is roasted rather than boiled; Fish, Hogsflesh, Heads, Brains, Feet of Beasts, and Sallads of cold Herbs, are all hurtful; but eat *Biscuit*, or Bread well baked, with Veal, Pullet, Rabbit, Chicken, &c. and daily drink Wine in Moderation, and a Decoction, or Ale of *Guaiacum*, *China*, *Sassafras*, *Sarsa*, *Ginger*, *Cinnamon*, &c. and sweat upon it. Be sparing in Diet, but labour, study and watch, because these dry the Body. If it possess the Hands, Walking is good; but if the Feet, then sit much, and work with the Hands.

Q. *What do you prescribe internally?*

A. *Antimonial Medecines* are good, and to be used as Occasion offers; also purge with *Pil. Cochiae*, *de Hiera cum Agarico*, *Pulv. Diaturbith. cum Rhabarb. Diasenæ*, *Cornachin. Pil. ex Dusb. Elect. Cariocostin.* &c. with *Calomel*, which is a safe Method, carefully used.

Q. *What think you of Phlebotomy in this Disease?*

A. In a true *Oedema* I do not like it; because, (1.) In Bodies cold and moist, as are those which are *Oedematous*, we never do it, except there be a *Plethora* too. (2.) The Matter is not malignant; for which Reasons I forbear it.

Q. *What are your local Applications?*

A. The Part is to be rubbed well with a Cloth, to open the Pores for the Medicines to penetrate: Then use Bay-Salt cum *Ol. Olivar.* or Brandy, or Bay-Salt with *Spanish Wine*, or the Patient's Urine. But in the State of the Tumor, when it is large, use this Fomentation, or such like, *R. Fol. Absinth. Abrotan. Calaminth. Origani, Pulegii, Sambuci,*

Sambuci, Chamæmel. Salvæ, Rutæ, ana Mj. Bacc. Lauri & Juniperi ana ʒj. Sem. Fœnic. dulcis, Carui, Cymini, ana ʒss. contundantur crass. modo. & in Aq. Font. q. s. bulliant ad dimid. partis consumptionem, Colaturæ, & adde S. V. q. s. & fiat Fotus. And then use good Bandage, either by Rolling, laced Stocking, Sleeve, Truss, or Glove. After fomenting, you may embrocate with *Ol. Laurin. Rutæ, de Castoreo, ana ʒij. Sal. Marini ʒij. Ms.* And apply this Cataplasm; *R. Farinæ Fabar. Hordei ana ʒvj. Summit. Absinth. Rutæ, Origani, Abrotani pulv. ana ʒss. Flor. Sambuc. Chamæmeli, Ros. Rub. pulv. ana ʒiij. coquantur in prædict. fotu ad Cataplasmatis consistentiam addendo sub finem Aluminis & Sulph. vivi ana ʒj. Ol. Rutæ & Mellis q. s.* Or if you would rather use a Plaister, *Empl. de Sapone* and *Diasulphuris*, are proper Discutients here. With which *Fotus* the Part may be fomented, or large double Cloths wet in it, and apply'd over the whole Member; and with a fit double-headed Roller, make good Bandage: or if in the Knee, or Leg, fit on a laced Knee-Piece, or Stocking, by which the Humour will be sent from the Part affected, to those adjacent, and so the more readily carried off by Internals.

Q. What Parts of the Body does this Tumor generally possess.

A. The Hands and Legs, because they are the farthest from the Heart, which is the Well-spring of Life, and also because they are framed of cold Parts.

Q. What Tumors are referred to an Oedema?

A. Six: viz. Three which are contained in a *Cystis*, and three which are without; that is to say, (1.) *Atheroma*. (2.) *Steatoma*. And (3.) *Meliceris*. These three are contained in a *Cystis*; and the other three, which are not so contained, are

are these, (1.) *Psydracium*, (2.) *Ficus*, and (3.) *Talpa*.

Q. *How will you know an Atheroma?*

A. It has a Substance like Curds or Rice Milk; it proceeds from thick and gross Phlegm.

Q. *How will you know a Steatoma?*

A. It is not so big as *Atheroma*, and contains a Matter like unto Grease, or a Sweatbread-like Substance.

Q. *How will you discern a Meliceris?*

A. It contains a Matter resembling Honey, and is bred of thin Phlegm mingled with some Choler.

Q. *How do you distinguish a Psydracium?*

A. It is a pointed white Pustle, containing a waterish Humour.

Q. *What is a Ficus?*

A. It is called *Ficus*, because its Roots resemble that of a Fig; and its inner Substance is like that of a Fig also.

Q. *What is a Talpa?*

A. It is so called, because as Moles heave up the Ground, so this Tumor lifts the Skin from the *Pericranium*, and is larger than a *Ficus*.

Q. *Is no other Tumor to be added to these?*

A. Modern Authors add one they call *Nata*, which is large, and is so called because it resembles the Buttocks, called *Nates*; is without Pain, consists of pituitous Flesh, seated most commonly in the Neck, and is only cured by Excision.

Q. *What is Ganglium, and Lupia, Tumors so called?*

A. They are round Tumors of the nervous Parts without Pain, only *Ganglium* is hard, *Lupia* soft. *Lupia* may be moved every way, but *Ganglium* only towards the Sides, &c.



C H A P. VII.

Of a SCIRRHUS.

Q. **W**HAT is a Scirrhus Tumor ?

A. It is a Tumor caused of Melancholy, or tough cold Phlegm, hard, fixt, and without Pain : If it wholly comes of Melancholy, it is of a Lead Colour ; but if of Phlegm, it does not change the Colour of the Skin.

Q. What is Melancholy ?

A. The fourth Humour in the Mass of Blood ; yet natural, cold and dry.

Q. Why is this Tumor hard ?

A. Hardness is the Offspring of Cold, Dryness, too great Repletion, or a Combination of all these together.

Q. Why is it without Pain ?

A. (1.) Because the animal Spirits cannot pass through an Humour so glutinous, as that which causeth a Scirrhus : Or, (2.) because it is benumbed with the Coldness of the Humour.

Q. Wherein does it differ from other Tumors ?

A. Herein it differs : A Phlegmon is attended with Pain ; an Erysipelas is not hard ; an Oedema yields to the Touch, and pits. Waterish Tumors have a thin clear Matter : And from a Cancer particularly, it differs in these Respects ; a Cancer is ever painful, this not at all ; a Cancer is hot, this cold ; a Cancer seizes the loose and flabby Parts, this the hard ones, as Joints, Tendons, and Ligaments ; in a Cancer the Veins appear full and black, here not so.

Q. What are the Prognosticks in a Scirrhus ?

A. An

A. An exquisite Scirrhus is incurable ; and one less exquisite, though it is seldom mortal, hardly admits any Cure, or with much Difficulty : A Scirrhus from Melancholy only, is warily to be managed, for fear it should degenerate into a Cancer ; but with that which is caused of Phlegm, you may be more bold.

Q. Why is an exquisite Scirrhus incurable ?

A. Because the Part is deprived of the Influence of the animal Spirits, and the Faculty it self is so strangled, that it cannot help the natural Heat to concur with Means which may be used, &c.

Q. What are the Indications of Cure ?

A. Diet, internal Medicines, and local Applications.

Q. Is Phlebotomy profitable in a Scirrhus ?

A. If the Veins be full, the Blood black, and Age and Strength permit, it is by all means to be performed, because the Quantity being lessened, the natural Heat will with more ease rule the rest.

Q. What is the Dietetick Cure ?

A. All their Meat must be of an easy Digestion, moist, and of a thin Juice, as Chickens, Pullets, Lamb, Veal, Rabbits, Sallads, Spinage, &c. Their Drink, small Wine, Cyder, or reasonable strong Beer. All salt Meats dried in the Smoak, Venison, coarse Bread, &c. are hurtful.

Q. What are your internal Medicines ?

A. Such as purge Melancholy and Phlegm ; as *Confectio Hamech. Pil. de Lap. Lazuli, Extr. Helleb. Nigr.* given in Decoctions of *Sena, Polypody, &c.* these for Melancholy ; and to purge Phlegm, give *Pil. de Agaric. & Hermodact. Diaturbith. &c.* But it is thought, that nothing is better than constantly taking a Diet-Drink of *Sarsaparilla, China, Guaiacum,*

Guaiacum, &c. instead of common Drink, and sweat every Morning well upon it.

Q. What are your external Applications?

A. Not repelling; because the Humour is thick and hard, and so unfit for Motion: but they ought to be *discussing* and *emollient*; and not *Emollients* alone, for thereby a *Scirrhus* is exasperated, and so will be apt to turn cancerous; *Unguent. Dialtheæ*, *Ol. Lilior. Adeps Human. Anseris*, *Empl. Diach. cum Gum. è mucilaginis*, *Gum. Bdellii, Ammoniacy Galbani*, &c. And before you apply any of these, foment the Part with *Decoct. Malv. Flor. Cham. Melilot. Sambuci, Sem. Lini, Fœnugrec. Rad. Altheæ*, &c. *cum aceto*, & adde *Sp. Vini q. s.* And in dry Bodies, and where the *Scirrhus* is more confirmed, and fixed amongst the Tendons, the Fume of Vinegar, sprinkled upon a hot Stone, often repeated, has its use herein.

Q. Having briefly received Satisfaction, as to a Phlegmon, Erysipelas, Oedema, and Scirrhus, which take their Original of the four Humours in the Mass of Blood, (viz.) Blood, Choler, Phlegm, and Melancholy: Now give me your Thoughts of Aqueous Tumors?





CHAP. VIII.

Of AQUEOUS TUMORS.

A. **A**QUEOUS Tumors are produced of the Superfluity of the Serum of the Blood, after it has performed its Office ; which moving the *expulsive Faculty*, part of it is sent to the Skin, which causes these Tumors.

Q. What is this Serum ?

A. It is a Salt Aqueous Humidity contained in the Blood ; which cannot be discerned, till the Blood, growing cold, this thin part is separated from the thicker by *Concretion*.

Q. What Quantity of this Serum is there in the Blood ?

A. In a healthful Person the Quantity is but small, and no more than is fit to make thin the Blood, that it may with more ease pass to all Parts of the Body to afford them Nourishment ; and this Serum has the same Matter with Urine and Sweat.

Q. What is Urine ?

A. It is nothing more or less than the Superfluity of this Serum mixed with the Aqueous Humidity of Meat and Drink, separated from the Sanguineous Mass by the attractive Faculty of the emulgent Veins and Kidneys, and by the Ureters sent to the Bladder.

Q. How is the Superfluity of Serum sent to the Habit of the Body ?

A. Partly because the Weakness of the Kidneys will not suffer them sufficiently to draw it ; partly because the Liver is too cold ; and partly from Immoderation in drinking of Water, Wine, Ale,

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Ale, Cyder, &c. See my *mechanical Essays on the animal Oeconomy*, &c.

Q. *What are the Signs of an Aqueous Tumor?*

A. It is sometimes less, sometimes bigger; yields when it is hard pressed, is not painful, does not pit, and it attended with an itching in the Part, by reason of the Saltness contained in the Humour. If they lie externally, they appear resplendent; and if they be deeper, and are shaded by the Hand and a Candle in a dark Room, a faint Transparency may be perceived: Those that are contained in a *Cystis*, if the Tumor be large, an Undulation may be perceived, if they are shooke, &c.

Q. *How will you perform the Curative Part?*

A. By convenient Diet, internal Medicines, external Applications, and manual Operation.

Q. *What is your Dietetick Method?*

A. Eat Roast-Meat rather than boil'd; shun all Immoderation in Drink; Flesh is better than Fish; and that is best to be of Kid, Veal, Rabbits, Land-Fowl, Biskets, and Bread well-baked, &c. shunning all Spoon-Meat whatsoever.

Q. *What internal Medicines do you use?*

A. They are of three sorts, (*viz.*) such as purge by Stool, by Urine, or by Sweat and insensible Perspiration.

Q. *What are your Catharticks, or such as purge by Stool?*

A. *Elaterium*, *Gutta Gamba*, *Pil. de Euphorbio*, *Cochiæ*, *Rad. Jalap. Mechoacan.* *Syr. è Spin. Cerv. Rad. Esula Maj.* &c.

Q. *What are your Diuretical Means, or such as provoke Urine?*

A. *Syr. Altheæ*, *è quinque Radicibus*, &c. *Sal Prunel.* *Rhenish Wine* strained through *Broom-Ashes*, *Sal Genistæ*, *Spir. Juniperi*, *Spir. Nitr. Dulc.* &c.

Q. *What are your Sudorific or sweating Medicines?*

A.

Of AQUEOUS TUMORS. 31

A. Decoct. Guaiaci, Sarsaparil. Sassafr. Agrimon. Beton. Sem. Fœniculi, Coriandr. Anisi, &c. Give it often, as the Patient can bear Sweating; and give it warm.

Q. What are your external Applications?

A. They ought to be such as discuss and rarify the Skin, that a Breathing may be given to the impacted Humour; as *Fol. Malv. Farin. Lupinor. Ol. Anethi, Cham. Vin. Alb. q f.* Of which make Cataplasms. Also Mustard, and Nettle-seeds, Brine, *Ammoniacum, Ebellium, Ol. Olivar. Vet. Ceræ, &c.* Of which, according to Judgment, make Cerats. But, before the Application of this or any other Medicines, the Part is to be well fomented with a strong Lixivium made of Broom-Ashes, Absinth. *Centaur. Calamint. Bacc. Lauri, Sem. Cymini, Fol. Scordii, Flor. Cham. Melilot, &c.* and then embrocate the Part with this, *R Sal. Nitri 3x. Piperis Alb. 3vj. Euphorb. 3ij. Ol. Laurin. 3vj. misce.* And if after all, the Cure succeeds not, an Apertion must be made, to discharge the Water: But in an *Ascites*, which is commonly the Product of some Chronical Distemper, which took its original from Obstructions of the *Viscera*, Tapping sometimes has, but often has no good Effect: And (if the *Viscera* are corrupted) it commonly hastens the Patient's Death; especially if too much Water is let out at once.

Q. What are the Differences of Aqueous Tumors?

A. Those in the Head are called *Hydrocephalus*; if in the Belly, *Ascites*; and if in the Cod, or Scrotum, *Hydrocele*, or *Hernia Aquosa*.

Q. How do you perform the manual Operation?

A. It is done either by Incision or Caustick, which must be in a depending Part, and must be kept open by a Pipe of Lead or Silver; and lastly, cured as other Tumors, according to the Artist's Judgment.



CHAP. IX.

Of the KING'S EVIL.

Q. **W**HAT is a Scrophulous Tumor ?

A. It is an hard Tumor of the Glands, inclosed in a *Cystis* of its own, bred of thick Phlegm.

Q. How is it called ?

A. In Latin, *Scrophula*, and *Struma*; in English, *The King's Evil*.

Q. Why is it call'd, *The King's Evil* ?

A. Because the Cure of it has been reported by People of a strong Faith, to be a particular Gift of God to the Kings and Queens of England, that are lineally descended from the *Blood Royal*, who cure it by their Touch; tho' where that cannot be had, it comes under *Chirurgical Considerations*, which is undoubtedly the most certain way of Cure. For as to the *Royal Touch*, it seems to me to be much of the nature of that of a *Seventh Son*, and both depend meerly upon Faith, or Fancy; and that's the Reason (I presume) that Children and Folks of a small Faith, often miss'd of a Cure in former Days.

Q. What are its Differences ?

A. Sometimes it is lodged in many Knots, sometimes in few; sometimes large, sometimes small; sometimes mild, sometimes malignant; one is moveable, another not; some have Veins, Arteries and Nerves, others none, &c.

Q. How do you distinguish it ?

A. I distinguish it from a Gland, because that is soft, and without Pain; is single, and slips when pressed, and returns again, and is generally
cutaneous :

Of ULCERS in General. 33

cutaneous: But the *Evil* (on the contrary) if touched, feels hard and is painful, and generally consists of many Knots, and lies deep. It is known from a *Ganglium*, for that is only in a *nervous Part*. *Nodes* are separable from the subjacent Parts, and breed in any; but the *Evil* sticks fast to the *Flesh*, and is generally in a *glandulous Part*.

Q. What are the Prognosticks?

A. (1.) Every *Scrophula* is difficult of Cure, because it is hard, it is contained in a *Cystis* of its own, and comes from a gross Humour. (2.) The painful is more difficult than that without Pain. (3.) The fixed worse than the moveable. (4.) It is more difficult in the forepart of the Neck than any where else. (5.) It sometimes turns *Scirrhus* or *Cancerous*. (6.) It generally seizes Children, but seldom on grown Youths or Men; wherefore when it does so, it is the more difficult of Cure. See Mr. Wiseman's Surgery, who has treated largely and learnedly about it.



CHAP. X.

Of ULCERS in General.

Q. WHAT is an Ulcer?

A. It is a *Solution of Unity* with loss of Substance in any Part, either proceeding from an inward Cause *eroding* the Part, or from some external Force making a Wound, &c. which in process of Time *degenerates* into an Ulcer.

Q. How is it called?

A. In Latin *Ulcus*, in Greek *ἔλκος*, ἀπο τῆ ἑλκισθαι, because it disjoineth the Part it possesseth: and so,

So, in general, this Term comprehends every Solution of Continuity.

Q. *What are the Differences of Ulcers?*

A. Ulcers are of two sorts, viz. *Simple* and *Compound*; now I call that a *Simple Ulcer*, which hath neither a Disease, Cause, nor Symptom joined to it, or complicate, besides the Solution of Unity; but in a *Compound Ulcer*, either some of these, or all, are found.

Q. *What are your Prognosticks in the Cure of Ulcers?*

A. In a Person of a good Complexion it is easy of Cure, and in a bad one the contrary; in *Moist* and *Hydropical Bodies*, in aged Persons, in Children, and in Women with Child, they are difficult of Cure: Those in the *Spondils of the Back* and great Joints, are most commonly mortal; those of a *round Figure* are more difficult of Cure than those of any other form: in *Heëtick* and *Hydropick Persons* they are hardly curable; if the Bone be *foul*, and the Ulcer *livid*, it is a bad Sign.

Q. *How will you know when a Bone is foul?*

A. (1.) If the Ulcer has been of long standing. (2.) If it has been cicatriz'd and breaks out again. (3.) If it yields more and thin Matter than the bigness of it requires. (4.) If the Brims of the Ulcer will not contract. (5.) If on the sight of the Bone it appears black, discoloured or rugged: And, (6.) If it does not yield to rational Applications.

Q. *How do you discern the Times of an Ulcer?*

A. In the beginning the Matter is *waterish* and *thin*; in the Increase, it flows more sparingly but thicker; in the State there is no *Ichorous Matter* but *Pus*, yet it looks somewhat thinner; and in the Declination, *Laudable Pus* appears.

Q. *What is Laudable Pus?*

A. It

A. It is white, uniform, and without ill smell.

Q. *How is the Cure of an Ulcer performed?*

A. (1.) By removing the Cause. (2.) By artificial Dressings.

Q. *What are the Causes?*

A. Generally a *Cacochymia*, and the *Distemperature* of the Part: The first has been spoke to before, in the Doctrine of *Tumors*; and the *Distemperature* of the Part is to be removed by things contrary to it; and in order to it, a *convenient Diet* must be prescribed.

Q. *How must it be dress'd, according to art?*

A. In the Beginning, *Digestives*, are to be applied.

Q. *Why so?*

A. (1.) Because the Matter which has left the Vessels, and has insinuated it self within the *Porosities*, corrupts: wherefore it must be concocted, that it may become *Laudable Matter*. (2.) Flesh will not generate, nor can *sarcotical Medicines* take place, unless the Matter be concocted.

Q. *May Digestives be applied to all Ulcers?*

A. No: (1.) Not to *Putrid Ulcers*, for *Digestives* being hot and moist, would here cause the greater *Putrefaction*. (2.) Not to *Rheumatick Ulcers*, for *Digestives* relax the Part, and make it more subject to receive the Matter that flows.

Q. *What is to be done next?*

A. *Repelling Medicines* are to be applied about the *Ulcer*, to repel the Matter that flows. (1.) To prevent *Fluxion* from the Parts adjacent. (2.) To strengthen them, that they may resist *Fluxion*. (3.) To further the *Desiccation* of the *Ulcer*.

Q. *What are the Digestives?*

A. *Pic. Resin. Cera, Unguent. Basilic. Aurcum, &c. cum Mercur. Præcipit. Rubr. Far. Tritic. Hordei, &c.*

Q. *What are your Repelling Medicines?*

C

A. *Succ.*

A. Succ. Cydonior. Plantag. Acet. Vin. Rub. Fol. Ros. Rub. Ol. Myrtil. Mastic. Unguent. Alb. Ter. Sigillat. Far. Fabar. &c. Of Emplaisters, Empl. de Minio, de Sapone, Diapalma, Diacalciteos, &c. with proper Bandage.

Q. What is next to be done ?

A. After good Digestion, I mundify or cleanse ; for if we apply incarnative Medicines before the Ulcer is well digested and cleansed, spongy Flesh will grow in spite of all Endeavours ; and so by consequence we cannot cicatrize.

Q. How will you know when an Ulcer is well digested ?

A. If the Quittor is pretty laudable, and if the Edges of the Ulcer is well coloured and soft, &c.

Q. What are your mundifying Medicines ?

A. Rad. Aristol. Rot. & Long. Virid. Æris, Merc. Præcipit. Rub. Mel. Succ. Apii, Mundificativ. Paracels. & ex Apio, Unguent. Apostolorum, Unguent. Basilic. cum Mercur. Præcipit. Rub. &c.

Q. How will you know when an Ulcer is sufficiently mundified ?

A. When I see it appears red, sensible, clean, and neither too dry nor too moist.

Q. What more is to be done ?

A. I am next to Incarn, or fill with Flesh.

Q. What Medicines will you make use of ?

A. Mastich. Myrrh. Sarcocol. Gum. Elemi, Tereb. Venet. Thus, Oliban. Liniment. Arcæi, Unguent. Aureum, &c.

Q. What Rule is there in compounding of them ?

A. They must not be either too soft nor too hard ; for if they be too hard, the weak Part cannot well have the Benefit of them ; and if they be too soft, the Heat of the Part will cause them to spread, and breed a Fungus.

Q. But

Q. But suppose a Fungus should arise, how will you abate it?

A. Then I use either strong Desiccatives, Cathetericks, or corrupting Medicines.

Q. How do you time the Application of these?

A. If the Fungus be soft, and but beginning, I use strong Desiccatives only; such as, *Ter. Sigillat. Lemnia, Bol. Aloes, Croc. Martis, Minium, Cerussa, Litharg. Auri, Alum. Vit. Rom. &c.*

Q. But suppose you find these not powerful enough?

A. Then I use Cathetericks; these burn, but gently, being hot and dry in the fourth Degree, and only superficially dry, and corrode the Flesh; (*viz.*) *Alum. Ust. Vivid. Æris, Merc. Præcipit. Rub. Turb. Miner. Unguent. Apostolor. Ægyptiac. &c.*

Q. If the Fungus be so hard and compact, that it resists these Medicines, what must then be done?

A. In this Case some use Escharoticks, such as *Lapis Infernalis*, and the Lunar Caustick; but these are dangerous Medicines, and ought to be managed by a skilful hand; also *Merc. Sublimat.* mixed with calcined *Roman Vitriol*, and *Ter. Sigillat.* or *Turb. Min.* mingled with the same; *Ol. Vit. Ol. Sulph. Aq. Fortis, &c.* and the actual Cautery; all which are attended with Pain and Difficulty, and ought never to be used but in urgent Necessity and with great Caution; but rather use *Fallopious's Catheterical Lint*, (*viz.*) *R. Aq. Plantag. Ros. Solani, ana ʒiv. Opii ʒj. Medul. Panis ʒij. Merc. Sublimat. ʒiv. super Porphyr. trit. omnia hæc commixta bulliant ad Consumpt. Med. dein colent per pannum Crassiusculum. Fila excerpta bulliant aliquandiu in hoc liquore, postea eximantur, siccentur, ac serv. ad usum.*

Q. We will now suppose the Fungus removed, but what will you do next?

A. I must next endeavour to cicatrize, or skin the Ulcer, if it be filled up nearly smooth.

Q. How is this performed?

A. By Epuloticks; as *Ter. Sigillat. Æs ustum, Minium, Ceruss. Empl. Diapalm. Unguent. Desic. Rub. Empl. de Minio*———*Unguent. Alb. Camph. Aq. Calcis, Unguent. Diapomph. Vitr. Rom. and Dr. Turner's Ceratum ex lapide Calaminar. &c.* the Recipe of which I here communicate, (*viz.*) *Butyr. Maii sine sale, & Ceræ flav. puriss. ana ʒxiv. Ol. Olivæ. opt. ℥ij. Lap. Calaminar. Pulv. ʒx. ʒij. Ms. Fiat Cerat. S. A.*

Q. At what time are Epuloticks to be applied?

A. Before the Flesh is even with the Skin, or whilst there is some Cavity; for if this be not minded, the Cicatrize is apt to be higher than it ought, and so would cause a deformity.

Q. You have given me the Signs of a corrupt or foul Bone; pray tell me how you will exfoliate or scale it, in order to cure the Ulcer, and then we will proceed to particular Ulcers?

A. First, the Bone is to be laid bare; and, 2dly, the scaling, or exfoliating of the Bone, is to be effected by proper Means.

Q. How is the Bone to be laid bare?

A. Three Ways; (1.) By Incision. (2.) By the Potential Cautery; as *Lapis Infernalis*, the Lunar Caustick, &c. Or, (3.) By Dilatation, enlarging the Ulcer, tho' the Bone appears but a little: And this is done by *Sponge dipt in some Melilot-Plaster*, and press'd hard till it is cold, and then cut out into Tents; also Tents made of *Gentian*, or *Pith of Elder*.

Q. Are either of these to be used to all Parts indifferently?

A. No: The Potential Cautery is not to be used, where many Nerves or Tendons are, lest they

they cause (by their great Pain) *symptomatical Fevers* and *Convulsions*; but they are rather to be applied where there is a *Caries* of the *Ulna* and *Tibia*. Dilatation is to be used where Incision or the Potential Cautery may not; (*viz.*) On the back of the Hand, Instep, and *Metatarsus*; nor may Incision be used at all *where Bones lie deep*, and have Veins, Tendons, and Arteries above them.

Q. The Bone being bare, how is it to be exfoliated?

A. By Medicines, Instruments, or actual Cautery.

Q. What are your desquamatory Medicines?

A. They ought to be very drying; and if the *Caries* be only superficial, those of the first sort may serve; as *Pulv. Myrrh. Rad. Aristol. Rot. &c.* And if the *Cariosity* be something deep, a second sort must be used; as, *Rad. Pucedan. Euphorb. Aloes, &c.* And if the *Caries* be very deep, we must use *Tinct. Euphorb. Ol. Caryoph. Ol. Sulph. Vit. Rom. Calcinat. &c.*

Q. If it be done by Medicines, how long Time will it require?

A. If they be rightly applied, about forty Days will do the Work.

Q. But suppose the Caries will not yield to Medicines, what then?

A. Then we must have recourse to Instruments; the principal of which is, *Mallet, Chissel, and Raspatory*; the *Caries* is to be taken off with the two first, and the Bone to be smoothed by the last: And then some of the former *desquamatory Medicines* must be applied; but if *both Tables* of the *Cranium* be foul, we must use the *Trepan*: The Use of which shall be treated of in another Place.

Q. How is the Bone to be scaled by actual Cautery?

A. The Cautery is to be *red-hot*; and, if the Bone lie deep, it is to be conveyed to it *through a*

Pipe of Iron ; and, if it be superficial, the Parts are to be covered by double Implaister, to prevent their being burnt.

Q. May it be applied to any Part ?

A. No : Not to the Skull, nor *Vertebræ* of the Back ; because of hurting the Brain in the one, and the *Spinalis Medulla* in the other.

Q. How is the Bone to be dress'd after Cauterizing ?

A. For some few Dressings, to hinder Inflammation, use *Aq. Rosar.* and *Alb. Ovi* ; and then apply to it *exfoliating Medicines*. Some use for the first three days, *Ol. Rosar. cum Alb. Ovi* ; and for three other Days, *Ol. Rosar. & Vitel. Ovi* ; and afterwards *Butyr. cum Mel. Rosar.* and over that *some Deterfive* : And continue this Method till the Bone scales ; and afterwards Incarn and Consolidate with *Rad. Aristol. Iris, Myrrh.* and such like.

Q. What do the Surgeons mean by Sordes, Ichor, and Sanies, in Ulcers ?

A. The Excrement which they call *Sordes*, is thick and glutinous ; that which they call *Ichor*, is thin and waterish, like to Water wherein Flesh has been boiled, having received no Alteration, but has flowed pure, as it is in the Veins and Flesh. *Sanies*, or *Virus*, is thin also, but has received some Alteration, by the Temperature of the Part.





CHAP. XI.

Of a Simple, Plain, and Hollow ULCER.

Q. **I**N the last Chapter, you told me the Difference between a simple and compound Ulcer; pray tell me now, how many kinds of simple Ulcers there are?

A. Two: The one is plain, and equal to the natural skin, and wherein only the *Cutis* and *Cuticula* are lost; the second is hollow, wherein besides the *Cutis* and *Cuticula*, part of the *Flesh* is gone also.

Q. How will you effect the Cure?

A. One Method serves for both. If the Blood be not pure, it is to be altered; as, if it be too thin, thick, hot, or cold; if it offends either in Quantity or Quality, the Patient is to be managed accordingly; the *Non-naturals* are to be discreetly ordered, and the Patient kept in due Temper, &c.

Q. What are the *Non-naturals*?

A. (1.) Excess in Eating, or Abstinence. (2.) Too much Motion, or Rest. (3.) Too much Sleep, or Watching. (4.) Too much Evacuation, or Retention. (5.) Too much Perturbation of Mind. (6.) The Air too hot, cold, dry or moist.

Q. What are the *Prognosticks* in Simple Ulcers?

A. The Cure becomes difficult or easy, according to the Nature of the Part ulcerated, and the Diet of the Patient. They are more easily cured in a fleshy Part, than in a Joint or Nervous Part; so more easy in a temperate Person than in one given to Debauchery.

42 Of Compound, but Mild, ULCERS.

Q. What is your Method of Cure?

A. Digest with *Terebinth. lot. in Aq. Font. & adde Vitell. Ovi*, or any Digestive in use, according to Occasion: Or you may both digest, deterge, and incarn, by *Unguent. Basilie.* alone, or mixed with *Liniment. Arcaei, & Merc. Præcipit. Rub.* in fit Quantities; and over this, *Emplastr. de Minio, Diapalma* or *Diacalciteos*; and, if need be, a Cloth wrung out of red Wine, over all. When it is well digested, mundify, incarn, and cicatrize, as directed in the former Chapter. If you are Master of your Business, and know exactly when to digest, when to deterge, when to incarn, and when to cicatrize, very great Performances may be done, with only Basilicon, Precipitate, and dry Lint, without any other Applications whatsoever; but the whole Art lies in timing things, which you must learn by Observation.



C H A P. XII.

Of Compound, but Mild ULCERS, in general

Q. YOU have already told me that a compound Ulcer has a Disease, or a Cause, or Symptom annexed to it; pray tell me now, what you mean by these?

A. Many Diseases in Man's Body keep Ulcers from healing; some corrupt the Humours, as the *Leprosy* and *French-Pox*; some hinder laudable Blood to be sent in sufficient Quantity, as the *Phthisis* and *Hætick Fever*; and some send too much waterish Humours with the Blood, as the *Dropsy*, &c. All which hinder the Union of the ulcerated Part.

Q. Pro-

Of Compound, but Mild, ULCERS. 43

Q. Proceed.

A. If the Humour offend in Quantity, it is to be abated by *Phlebotomy*, *Catharticks*, and slender Diet; if it offend both in Quantity and Quality, we are to use both purging and altering Medicines. So far of its Process, accompanied with a Disease; we next come to discourse of it, as it has a Cause annexed to it, and that is the Distemperature of the Part.

Q. What is that?

A. The single Distemperatures are in number four; (*viz.*) *too dry*, *too moist*, *too hot*, and *too cold*.

Q. How do you know the dry Distemperature?

A. The Colour of the Ulcer is ill to look to, if you touch it, it seems hard and dry, and little or no Matter flows from it.

Q. How is it to be removed?

A. If the Body be *plethorick* or *cachochymick*, in the first place bleed and purge; then foment with warm Water, and apply Water and Oil mixed, a Cloth or Pledget being wet in it, and laid over the Ulcer.

Q. How long will you use this Method?

A. Till the Part is a little tumified, soft and moist, and of a ruddy Colour.

Q. How do you know a moist Distemperature?

A. The Flesh will be apt to be moist, a *Fungus* will be apt to grow, and plenty of Excrements will flow from the Ulcer.

Q. How is it to be removed?

A. Strong *Sarcoticks*, or *Desiccatives* mixed with Digestives or Incarnatives are to be used; (*viz.*) *Plumb. ust.* *Lap. Calaminar.* *Rad. Irid.* *Gum Oliban.* *Mastich.* *Æs ustum*, &c.

Q. How is a hot Distemperature known?

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A. The ulcerated Part will be somewhat tumified, hard and red, and the Party's Complaint, and your own Touch, will inform you.

Q. How is this to be removed?

A. Dissolve ʒij. of *Alum. Roch.* in *Aq. Plantag.* ℥ij. or dissolve *Vit. Alb.* or *Vit. Rom.* in *Aq. Plantag.* or *Aq. Sperm. Ranar.* &c.

Q. How do you know a cold Distemperature?

A. By its Colour, Hardness, Sense of the Patient, and your own Feeling.

Q. How is this to be remedied?

A. (1.) Foment the Part with a Fomentation made *ex Cerevis. Fort.* wherein has been boiled *Calamint. Centaur. Absynth. Chamæmel. Tanaset. Scord. Rata,* &c. Then dress the Ulcer with a Digestive and an Emplaster *ex Paracels. Diach. cum Gum de Mucilaginis.* &c. over all.

Q. What do you mean by a Symptom annexed to an Ulcer?

A. Chiefly *Pain*; which by Attraction brings Humidity to the Part, and so obstructs the Cure; it also inflames the Part, causing Watching, Fainting, and sometimes Convulsions.

Q. How is Pain to be removed?

A. Two ways: (1.) By taking away its Cause, which is Affluxion of Humours. (2.) By Application of Anodyne Medicines; both which have been spoken to, in the Doctrine of Tumours, Page 2, 6, &c. Out of which frame Cataplasms or other Dressings at your Discretion.





C H A P. XIII.

Of a Sinuous ULCER, without any Callosity.

Q. **W**HAT is a Sinuous Ulcer?

A. Surgeons call that *Ulcus Sinosum*, which is hollow like a Coney-Burrow; they are sometimes superficial, sometimes deep, sometimes strait, and sometimes oblique, &c. Some of which have neither Hardness nor Callosity, which we term *Ulceræ Cavernosa*; and some have both Hardness and Callosity, and these are called *Fistulae*.

Q. How is *Ulceræ Cavernosa*, without Callosity cured?

A. (1.) By Injection of fit Medicines without opening. (2.) By opening, and dressing it artificially.

Q. Suppose you was to do it without opening, how would you proceed?

A. First the Cavity is to be filled with Flesh, and the disjointed Parts are to be agglutinated.

Q. Of what Nature ought the Application to be?

A. The Incarnatives must dry without Erosion, and the Glutinatives must have both Affrication and Dryness.

Q. What Medicines are they?

A. An Injection of *Aq. Hord. Mel. Rosar. Myrrh. Sarcocol. Bacc. Myrt. Sumach. Rad. Tormentil. Spir. Vin. &c.* fitted in due Proportions, and strongly boiled, and injected warm.

Q. How will you know when 'tis sufficiently mundified?

A. When I find the Quittor neither stinking, reddish, pale, black, nor waterish.

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Q. Well; but if it be not enough mundified, how will you proceed?

A. Then I will form Injections *ex Centaur. Absynth. Marub. Alb. Card. Ben. &c.* decocted in Wine, with an Addition of *Mel. Ægyptiac. & Mel. Rosar.*

Q. How is it to be dressed artificially?

A. (1.) Lay upon it (the whole length of the Cavity) *Empl. ad Herniam*, folded four or six times double when spread, to press the Parts together when rolled, in order to Union, and then inject your Medicine; then put in a short leaden Pipe, having the Brims turned back, to keep it from slipping in; then shut up the Orifice and the Tent with a Bit of the aforesaid Emplaister, snipp'd in the middle, to let out the Quittor; above that, place a Piece of Sponge, moistened with the Medicine with which you dress the Ulcer; and over that place a Pledget of Tow. On the Cavity of the Ulcer lay a thick Bolster; and over all, a soft Linnen-Cloth double; then begin your Rolling at the Bottom, where it must be something strait, (but not so as to cause Pain) to press out the Quittor, and cause Agglutination.

Q. How often is it to be dressed?

A. If much Matter does not flow, dress it every third Day.

Q. How will you know if it is about to agglutinate?

A. If I find the Matter abate, is laudable in Colour and Consistence, and have no ill smell, and if the Cavity be without Pain and Tumor.

Q. But why must it be dress'd so seldom?

A. Because often dressing gives way to cold air, which hinders Union.

Q. But was must be done if the Cavity be lower than the Orifice?

A. Way

Of a Sinuous ULCER, without Callosity. 47

A. Way must be made for the *Quittor* two Ways: (1.) Either by opening the lower end of the *Sinus* only: Or, (2.) By laying open the whole Cavity; for if one of these be not done, no Cure can be expected.

Q. In what Cavities will you lay open the lower-end [only]?

A. (1.) If the *Sinus* be of an extravagant Bigness. (2.) Or if it be in a great Joint: Or, if there be Nerves, Tendons, great Veins, or Arteries in the way, these Reasons of which are evident.

Q. How are these ways to be performed?

A. By Caustick, or Incision.

Q. In what Cases is a Caustick most proper?

A. (1.) If the Patient be timorous. (2.) If he be sick and weak. (3.) If it be in a Part that may cause Deformity. (4.) If there is fear of a Flux of Blood.

Q. What do you observe in applying your Causticks?

A. If the Situation of the Part or Member wherein the *Sinus* is, be in the upper side, then *Lapis Infernalis* is best; but if on the lower side, then the common Caustick is best.

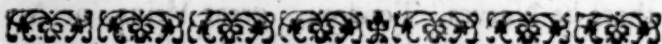
Q. How will you open it by Incision?

A. Either with an Incision-Knife, and Directory, or with the Probe-Scissars, which is best; then fill it with *Dorsets*, to keep the Lips asunder, and arm them with Rectitives, as in other Cases.

Q. But what if you find, that notwithstanding all this, the Ulcer does not heal as you expect?

A. Then I must give Drinks made of *Sarsaparilla*, *Guaiacum*, *China*, *Agrimon*, *Hyperic*, *Virg. Aurea*, *Sigil*, *Solomon*, *Rad. Symphit*, *Torment*, *Bistort*, *Marub*, &c. Which the Patient must drink of, for three Weeks or a Month, and keep to a spare

spare Diet, and such as is of easy Digestion ; Or let the Patient take ʒj. of *Tinctura Gum Guaiaci*, in Syrup of Damask Rose-water; and then mixed with a glass of Wine in the Morning fasting, half an hour before Dinner, and last at Night, going to Bed. The Prescription is this ; *R Spirit. Vin. Rect. ℥ij. Pulv. Gum Guaiaci ʒiv. Dissolv. in Balneo*, till the Tincture becomes reddish, &c.



C H A P. XIV.

*Of the palliative Cure of SINUOUS ULCERS
or FISTULAS with Callosity in general.*

Q. **W**HAT is a Fistula?

A. It is a *Sinuous Ulcer*, narrow, and long, with *Callosity*, and *virulent stinking Matter*, with little Pain.

Q. How will you know to what Part the Fistula passeth?

A. If it passeth to the fleshy Parts, the Matter appears white, smooth and plentiful, and the Part where your Probe stops, seems soft. If it pass to a Nerve, a fat and oily Matter comes forth ; the Motion which is caused by that Nerve is impaired, and the *Fistula* is more than ordinary painful, and the Bottom being touched by your Probe, causeth a Pain and Numbness. If it pass to the Veins and Arteries, yet so as their Coats be not *eroded*, then the Matter looks like Lees of red Wine ; if it has *corroded* a Vein, Blood issues out thick, of a dark Colour, without Impetuosity ; but if an Artery be wounded, the Blood is more red, bright, and comes forth with leaping and Violence, (or *per Salium*, as Surgeons call it ;) if
it

it has passed to the Bone, and that be corrupt, the Matter is yellow, of an ill Scent, and the Bone is to be felt rough, uneven, &c.

Q. What Presages can you make concerning the Cure of Fistulas?

A. No *Fistula* is of easy Cure: (1.) Because of the Unfitness of the Part to receive proper Medicines. (2.) By reason of the Quality of the Medicines, which must be sharp and biting, and so cause Pain; from whence often come Fevers and Faintings, &c. (3.) Those which are superficial are more easy of Cure than those which are deep. (4.) Those with many *Sinuosities*, require Incision. (5.) In those ending on Veins and Arteries, you are to encounter with *Hemorrhages*. (6.) In those on the Nerves and Tendons, with Pain and Numbness. (7.) Where the End is more depending than the Orifice, it is hard of Cure. (8.) In *Fistulas* of the Back, if the *Spine* be carious, shun the Cure. (9.) *Fistulas* in the Joints are dangerous. (10.) *Fistulas* of a long standing, in a depending remote Part, by which Nature hath been used to discharge her self of Superfluities, if they are not painful, may rather be kept open than cured; for they hinder Diseases, and keep the Body in Health.

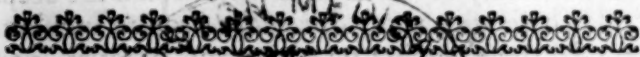
Q. What do you call a palliative Cure?

A. It is when a *Sinuosity* is inwardly dried for a time, and the Orifice seems shut up by a thin Skin, until new Moisture opens the Orifice again: Or, it is a Method whereby it is not suffered to grow worse, but by Art is made more easy, and the Life of the Patient is more comfortable than otherwise it would be.

Q. How is this done?

A. (1.) By a convenient Diet, feeding on such Meats as are of an easy Digestion and afford good Juice,

Juice, the Body is to be purged by gentle Means, either by Diet-Drinks or purging Ale, made of *Sarsa. Rad. Symphit. Polypod. Tormentil. Hermodact. Fol. Sen. Rad. Liquor. Sen. Anisi. Guaiacum, Sanicul. Alchimil. &c.* and drink of it three times a Day. (2.) By local Applications. Injections of *Aq. Calcis. Syr. Ros. &c. Myrtallor. Litharg. Auri, &c.* Or, *ex Aq. Plantag. Virg. Rom. &c.* injected warm. Lay to the Orifice a Pledget of Lint wet in the same, and dress that a Diapalma Plaister, &c. and dress it only every other Day.



Q H 23 A 88 XV.

Of the true Cure of FISTULAS in general.

Q. BY what Means will you obtain a Cure of a Fistula?

A. By Diet, Medicine, and manual Operation.

Q. What Diet do you advise?

A. The same as in the Cure of an Ulcer, but it ought to be taken very sparingly, and such as is of easy Digestion.

Q. What is your pharmaceutical, or Medicinal Method?

A. If a *Cacochymia* or *Plethora* have seized the Patient, let him take for some time some purging Ale, composed of *Sarsaparilla, Guaiacum, Rad. Bistort. Symphit. Tormentil. Polypod. Fol. Alchimil. Sanicul. Fol. Sen. Sem. Anisi, Fœnicul. Rad. Glycyrrh. &c.* Also you may give *Elect. Cariocostin. è Succo Rosar. &c.* After the use of these, you may give a consolidative Drink made of *Rad. Osmond. Regal. Centaur. Min. Agrimon. Vinca Pervinca, Virga Aurea, Symphit. Plantag. Equiset. &c.* which

Of FISTULAS in general. 51

is to be drank of, three or four times a day, a Pint at a time, which may be sweetened with Sugar, if the Patient will.

Q. *What is your Chirurgical Method?*

A. (1.) The *Fistula* is to be *dilated*. (2.) The *Callus* is to be *removed*. (3.) The Part is to be *mundified*. (4.) *Union* or *Consolidation* is to be *procured*. (5.) And then it is to be *cicatrized*.

Q. *How is it to be dilated?*

A. Three several Ways: As, (1.) By Incision. (2.) By Tents of Sponge, or *Rad. Gentian.* or Pith of Elder. And (3.) By the *Fistula Tent*.

Q. *In what Cases will you make Incision?*

A. If the *Fistula* is not deep, and in strong Bodies; but if it has many *Sinuosities*, or a *Callosity*, the one is to be dilated, and the other removed, before Incision be made.

Q. *How do you prepare your Sponge Tents?*

A. Melt a sufficient Quantity of *Melilot Plaster*, and, whilst it is hot, put a Sponge into it, to suck it up; then take it and put it into a Press, and squeeze it hard, where let it remain till cold; then cut it out into Tents of what form you please.

Q. *How is the Fistula Tent prepared?*

A. Take all the *Down* (without any of the Threads) of *fine Lint*, with which mix some of the White of an Egg beaten, and make Tents of what length your *Fistula* requires; make them upon a smooth *Deal Board*, and dry them, which will be stiff and pierce like a Probe, and which may be armed with fit Medicines, &c.

Q. *How must the Callosity be removed?*

A. Either by *Medicines* or the *actual Caustery*.

Q. *What are the Medicines?*

A. (1.) Mild. (2.) More harsh. (3.) Such as are caustick. The first Sort are of an emollient, digestive Quality, and to be used if the
Callus

Callus be but small, in a fleshy Part, and a young Patient: As, *Unguent. Dialtheæ*, or *Nicotianæ* mixed with *Turbith. Mineral. or Præcipit. Rub. &c.* Of the second sort, are *Unguent. Apostolor. cum Turb. Min. vel Præcipit. Rub. Alum. ust. &c.* Of the third sort, (*viz.*) *Cautsticks*, some are more gentle, as *Auripigment. Calc. Viv. Sulph. Viv. &c.* Of the second Sort, are *Virid. Æris, Vitri. Calcinat. Alum. ust. Turb. Min. Vitriol. Vomitiv. &c.* mixed in fit Proportions, which are thus to be used: If the *Fistula* is dilated by Incision, sprinkle the *Callus* with some of these Powders: Or, if you use Tents, mix these Powders with some *Populeon*, and arm your Tents with it. But where there is great *Callosity*, and the *Sinus* small, and its Mouth fungous, I use the following Troches; *R. Mic. Panis ʒij. vel q. s. Pulv. subtiliss. Merc. Sublimat. ʒls. Pulv. Phomb. Rub. & Rad. Gentianæ ana ʒij. misce.* Of these (being well incorporated) make Troches and Tents of divers Forms, and dry them; and either put one into the *Fistula*, or upon its Mouth, or (if superficial) its whole Length, and in twelve Hours or less, (according as it is deep, or superficial) it will do its Work effectually and safely, and with but little Pain: But take care it be not apply'd to Nerves or Arteries, for fear of Mischief.

Q. Very well; but what is to be done afterwards?

A. You must, twice a day, apply to the Part an *Anodyne Cataplasma*, and you must let the Tent remain in the *Fistula*, till it falls out of itself, (unless you have Reasons to the contrary) because they will (by so doing) bring the *Callus* out with them: And as to the *actual Caustery*, it is to be used as seldom as possible, and with great Caution, as the able Surgeon sees fit.

Q. How will you mundify?

A. By

Of a FISTULA LACHRYMALIS. 53

A. By Unguent. *Ægyptiac.* mixed with Brandy or Wine, and injected warm once a day.

Q. How will you consolidate, or unite the Parts?

A. Decoct. *Rad. Arist. Rot. Torment. Bistort. Symphit. Centaur. Min. Virg. Aurea, Sigil. Solomon. Plantag. &c.* very strongly; then, whilst warm, add to every Pint *Mel. Angl.* ziv. boil it again; strain and clarify it, which inject into the *Fistula* warm; and dress it as directed in the Cure of a Sinuous Ulcer.

Q. How is it to be cicatrized?

A. That calls for no new Directions.

Q. How shall I know when it is near cured?

A. You may judge it to be so, when the Humour is thick, little, white, even, and the Place void of Pain and Tumour.



CHAP. XVI.

Of a FISTULA LACHRYMALIS.

Q. WHAT is a Fistula Lachrymalis?

A. A Tumor called *Anchilops*, arising between the great Corner of the Eye and the Nose; if it apostemates, it is called *Ægilops*; which, being neglected, degenerates into a *Fistula*, even quite to the Bone, which is called *Fistula Lachrymalis*.

Q. What are the Signs of it?

A. (1.) It is known by its Orifice. (2.) By pressing with the Finger, the Matter issues out. (3.) By passing a small Probe to the End of its Sinus.

Q. What are the Prognosticks?

A. (1.)

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A. (1.) All these *Fistulas* are of hard Cure. (2.) If the *Quittor* has made its way into the inner Passage of the Nose, it is not to be cured. (3.) If it turns cancerous, we are only to use a *palliative Cure*. (4.) If it continues long, it causes a Consumption of the Eye, or Blindness.

Q. Why are they of hard Cure?

A. (1.) By reason of the Humidity of the Part. (2.) By reason of its continual Motion. And, lastly, by reason of the Tenderness of the Place.

Q. By what Signs do you know it to be cancerous?

A. By its livid, hard Brims, exquisite Pain, and *fætid virulent Matter*?

Q. How will you cure a *Fistula Lachrymalis* not cancerous?

A. (1.) Dilate it with the *Fistula Tent*, and then enlarge it with the *Sponge Tent*. (2.) You are to remove the *Callosity* with *Merc. Præcipit. Rub. Turb. Min. lot. Unguent. Popul. &c.* as before directed. (3.) You must mundify with *Mel. Rosar. in Aq. Rutæ* warm, once a day. (4.) Consolidate with *Aq. Plantag. cum Syr. è Ros. sicc.* And, (5.) cicatrize with *Empl. de Minio, Diapalma, cum Succis, &c.*

Q. How will do if the Bone be foul?

A. This is rectified two ways: (1.) By actual Cautery. (2.) By Incision.

Q. As how?

A. The actual Cautery carries Horror with it; yet most Authors like it as the best way. It must be made in the Form of an Olive-Stone, and the Parts are to be defended from the Fire with a hollow Plate, or else pass it through a *Canula*; and afterwards apply to it Pledgets dipped in *Vin. Rub.* and over all *Diapalma, &c.* till the Bone scales; then manage it as has been before directed.

Q. How is the Incision to be made?

A. Having

Of a FISTULA LACHRYMALIS. 55

A. Having with a Probe found out the Cavity, both upwards and downwards, draw a Line with Ink, between the *Glands* of the Eye and the *Trochlea*, thro' which the *small Tendon* of the *Musculus superior (vel major)* passeth, and ends obliquely in the superior Part of the *Cornea*; then make Incision to the Bone, and dilate the Incision with your Nails; then thrust in a small *Troch* made of *Turb. Min. Ter. Sigil. & Populeon*, and about it lay a Pledget of *Populeon*, and over that *Empl. Diapalm.* and with fit Boulstering and Bandage roll it up, first filling the *Orbit* of the Eye with soft Linen Boulsters dipped in *Aq. Sperm. Ranar.*

Q. How long is this Method to be used?

A. Morning and Evening, until the *Troch* with the *Callus* fall out of its own accord, and then upon the Bone, so far as it is carious, I apply *Pulv. Euphorb.* then fill up the Cavity with a Piece of Sponge prepared with *Melilot*; over that a Pledget of *Unguent. Popul.* and an Emplaster, and roll it up as before directed.

Q. How long are these Dressings to be used?

A. Until the Bone scales, which is about twenty Days after; then mundify, consolidate, and cicatrize, as before directed.

Q. But suppose that the whole Substance of the Bone of the Nose joining to the Fistula be foul, and so (after the Fistula be healed) it breaks out again?

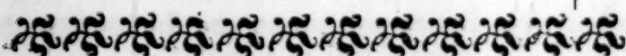
A. Then enlarge the *Sinuosity* till the corrupt Bone appears; then pierce the Bone of the Nose with some fit Instrument, that the Quittor may discharge through the Nostrils, and proceed to heal, as is directed in the palliative Cure.

Q. But if it proves cancerous, how will you proceed?

A. The best Medicine in this Case, is quoted by Dr. Read (the Surgeon, not the Quack) from *Heurnius*, and is this; *R Calaminar. Ter. ust. atque*
in

56 Of a FISTULA in the Breast.

in Acet. Vini extinct. ʒj. Myrrh. Plumb. ust. & lot.
ana ʒss. Croci gr. v. Opii gr. ij. Aeris ust. Div.
Decoct. Fœnugrec. ʒj. misce. Or instead of Decoct.
Fœnugrec. mix it with fresh Axung. Porcin. in Aq.
Ros. lot. &c.



C H A P. XVII.

Of a FISTULA in the Breast.

Q. **H**OW does a Fistula Thoracis happen?

A. By a penetrating Wound of the Breast, or from a *Pblegmon* possessing the *Pleura* and *intercostal Muscles*.

Q. What are the Signs of a Fistula Thoracis?

A. They are *obvious* to every eye; it is therefore needless to give any.

Q. What are the Differences of these Fistulas?

A. Those which follow a Wound have but one Orifice, and that according to the Penetration of the Wound; but that which ensues an Imposthume has commonly more Orifices than one, some of which pass *directly*, and some *curved*.

Q. Give the Prognosticks.

A. All *Fistulas* of the Breast are of difficult Cure.

Q. Why so?

A. (1.) Because the Breast is in continual Motion. (2.) In these *Fistulas* the *Pleura* is commonly ulcerate, which hardly admits of Cure. (3.) It often corrupts a Rib. (4.) The end of it is commonly lower than its Orifice, which prevents Expulsion of *Quittor*. (5.) Great Caution is to be used in the Application of Medicines, in this Case more than in other Parts. (6.) Because *Fistulas* here waste the Body, and produce *Hectic Fevers*; which

Of a FISTULA in the Breast. 57

which if once formed, are scarce ever curable, joined with a *Fistula* of the Breast.

Q. How is it to be cured, if curable?

A. By a convenient Diet, pectoral Decoctions, and fit Applications.

Q. What is to be prescribed?

A. Such as is ordered in the general Cure of Ulcers.

Q. Of what are your pectoral Decoctions compounded?

A. Ex Flor. & Fol. Tussilag. Capil. Veneris, Marub. Alb. Symphit. Tormentil. Bistort. Flor. Violar. & Borag. Rad. Enulæ, Fol. Hysop. Flor. & Rad. Malvar. Rad. Petroselin. Fœnicul. Liquorit. Scabious, Valerian, Sarsaparilla, China, Guaiacum, Lvar. Pass. Fic. pinguid. &c. Of these, Drinks are to be made, and drank in large Quantities, at least two Quarts in a Day. But that you may have a certain Prescription to depend upon, take this following, which has done Wonders in this Case, and will effect a Cure, if the Patient is curable, (viz.) R Rad. Liquorit. ʒiv. Raf. C.C. ʒij. Raf. Eboris ʒj. Sant. Citri ʒij. Lign. Sassafr. & Sarsaparilla, ana ʒij. Capil. Veneris, Ling. Cerwin. Heder. Terrestr. Tussilag. Agrimon. ana Mij. Coq. omn. in Cong. vj. Aq. Font. ad Cong. iv. cum Uv. Pass. Exacinat. ℥j. Mel. Anglican. ℥ viij. Boil, strain, and ferment with Yest, (like Ale) and when it is almost fermented enough, hang in it (in a Bag) Nuc. Mosc. Contus. N°. iij. Fol. Rorismar. sicc. Mj. Keep it a Week, and then drink it for common Drink, for four or six Weeks. If a Fever attends, use the Cortex also; and if it be very high, make the Drink with half Honey, and half Sugar.

Q. You say, that one Reason why a *Fistula* of the Breast is of difficult Cure, is, because the Ending of
the

58 *Of a FISTULA in the Breast.*

the Fistula is lower than the external Orifice ; pray tell me how this is to be remedied ?

A. By Incision ; in which two things are to be considered ; first, the Place ; and, secondly, the Care to be used in the Operation.

Q. *What Place is best ?*

A. The left side rather than the right, for fear of wounding the Liver, or the *Diaphragma*, which it beareth up ; and as for the particular Part, let it be about the beginning of the next Rib, above which the Orifice of the *Fistula* shews itself.

Q. *How is it done ?*

A. Divide the Skin towards the upper Part of the lower Rib, then make way throughout the *intercostal Muscles*, and dry all with a Sponge, and put in a Sponge Tent ; and if you pass no further than the Division of the *Pleura*, you are safe.

Q. *But what are the Signs of an Heetick Fever ?*

A. If it be confirmed, the Eyes grow hollow, the Colour of the Skin decays, the Skin of the Forehead seems dry and stretched out, the Eyelids are heavy, the Cavity of the Breast seems as hollow as if it was without *Viscera*, and the Body is a mere Skeleton : These are true Signs of a *Heetick Fever*, or a dry *Marasmus*.

Q. *But if such a one comes to you, and implores your Help, and you tell him his Danger, and that you believe him past Recovery, yet he still desires you to do what you can, what is the Method you would use, to make his Life easy ?*

A. I would inject into the *Fistula*, *Aq. Plantag.* in which *Fol. Ros. Rub.* have been boiled, and cover my Tent with *Diapalma* ; I would order him Broths of *Mutton, Veal, Chicken, &c.* wherein had been boiled *French-Barley, Mallows, Raisins,*
Mari-

Marigold-Flowers, Cowslip-Flowers, Coltsfoot-Flowers, &c. Also give him *Jellies, Almond-Milk, Goats-Milk, or Asses-Milk, Calves Feet stewed, poached Eggs, and fresh sweet Butter*; and if by this Method he gathers any Strength, be not out of hope, and encourage the Patient.

Q. But what are your local Medicines in Fistula's here without a Hectick Fever?

A. The Method here differs but little from the general Method: *Dilate* with the *Fistula Tent* and *Sponge*; but in removing the *Callus*, take care that the *Trochisk* do not reach to the Cavity of the Breast, but rather apply a Tent arm'd with *Populeon*, wherein some *Fistula-Powder* has been mingled; and when the *Callus* is removed, mundify with *Aq. Calcis*, and *Mel. Rosar.* (but take heed of injecting any bitter Medicine.) This being done, proceed, and consolidate with an Injection of *Aq. Plantag. & Syr. è Ros. sicc.* Then wet a Pledget in this Syrup, and lay over the Orifice, and an Emplaister *ex Paracels.* over all, &c.



CHAP. XVIII.

Of a FISTULA in the Belly.

Q. WHAT Parts do you include, when you speak of a Fistula in the Belly?

A. I understand and include the *inguinal Parts*, and in *Ano.*

Q. From whence do Fistula's in the Grain proceed?

A. Either from *Venereal Buboës*, neglected or ill-cured, or from a *Plethora* and *Cacochymia*, the Matter not coming to the *Emunctories* themselves, which receive the Excrements of the Liver, but

D hinder'd

60 Of FISTULAS in the Belly.

hinder'd either thro' Weakness of the *expulsive Faculty*, or by the crossing of the *Muscles*.

Q. *What Presages can you make in this Case ?*

A. *Fistulas* in these Places, which pass to the Cavity of the *Abdomen*, are very hardly cured ; and if the Guts are eroded, and the Excrements come forth, 'tis great odds, but Death puts an end to the Controversy ; tho' such things have by chance been cured, and therefore Men are not to be left to perish without Help.

And if there is any Belief in Man, by the Diet-Drink in the foregoing Chapter, Mr. *Paine*, a very sensible ingenious Surgeon, and an honest sober Man, now living at *Laystoff* in *Suffolk*, (from whom I first had the Prescription) told me, That a Woman, who by reason of a *Tumor* on the *Abdomen*, had a Mortification of the Intestines, with loss of Substance there, whereby the Excrements came continually out ; and altho' all hopes of Life were gone, was perfectly cured, (as it were miraculously) by the internal Use (*alone*) of that Drink, with fit external Applications ; And, *what has been, may be* ; therefore never despair, so long as there is Life ; and such a Cure will never want Applause, nor fail of Reputation as well as Reward.

Q. *How are these Fistulas to be cured ?*

A. If they run along superficially, the best way is to lay them open, and then the *Fistula Powder* to be applied, and follow the Method already laid down, in order to finish the Cure.

Q. *Tho' you can promise no Cure, if the Spine be foul, yet something must be done, as long as there is Life ; pray how will you dress such a Patient ?*

A. Only use such an Injection as this of *Aq. Plantag. Syr. Ros. sicc. Tinct. Myrrhæ, &c.* with a *Plaster ex Paracels. &c.* over all.

Q. *But*

Q. But suppose the Guts are perforated, and the Excrements come forth ?

A. Let the Patient's Diet be Sheeps and Calves-Heads and Feet stewed ; also Rice boiled in Milk, wherein Steel has been often quenched ; also a Glass of red Wine with a Toast, and use the Diet-Drink aforesaid, and keep the Orifice open with a Sponge Tent, till the Gut be healed. Dissolve a little *Alum. Roch. in Vin. Rubr.* and add *Syr. Myrtillor.* and make an Injection ; and for the rest of the Cure, do as has been directed.

Q. From whence proceeds a Fistula in Ano ?

A. Most commonly from a *Phlegmon* there, broke, and ill-cured.

Q. What are the Differences of Fistulæ in Ano ?

A. Some penetrate the *Intestinum Rectum*, and some do not ; and both these again, are either superficial or deep.

Q. How will you know whether it has pierced the Intestinum Rectum, or not ?

A. By these Signs : (1.) If upon breaking Wind part of it makes way thro' the *Sinus*. (2.) If the Excrements appear mingled with the *Quittor*. (3.) If an Injection passes quite through. (4.) By the Finger and Probe.

Q. What Prognosticks have you in this ?

A. No *Fistula in Ano* is easy of Cure.

Q. Why ?

A. Because this Part is the Sink of the whole Body, and affords great Quantity of Filth and superfluous Humidity, which hinders the Cure.

Q. How will you proceed in the Cure ?

A. It is to be effected, (1.) By convenient Diet. (2.) By inward Medicines. (3.) By Incision or Deligation : And (4.) By proper Medicines.

Q. What Diet and internal Medicines are best ?

A. That which I have already directed.

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Q. When is Incision or Deligation to be attempted?

A. When the *Fistula* is superficial, and not else.

Q. How is Incision to be made?

A. If the *Fistula* does not pass to the *Intestinum Rectum*, after you have enlarged it and removed the *Callosity*, lay it open by a Snip of your Probe-Scissors, and by Dorsels keep the Lips asunder; then digest, mundify, incarn, &c. as has been directed; and be sure to take care, that sound good Flesh be generated in the Bottom, before you endeavour to unite the Brims.

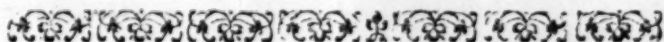
Q. But suppose it to go deep inwardly, and you cannot come to make Incision?

A. Then dilate the *Fistula* with the *Fistula* or Sponge-Tent, and remove the *Callus* with the *Trochisk* aforesaid; which being come out, and the *Callus* quite gone, cleanse with *Mel. Ros.* & *Aq. Calcis*; then consolidate and cicatrize, as has been taught; and remember daily to shorten your Tents, till the *Sinus* is quite fill'd up, which you shall know by the Goodness and small Quantity of the Matter it yields. But if the *Fistula* reach into the *Intestinum Rectum*, then cutting asunder the whole Length of the *Sinus* by Deligation, is the best way to cure it.

Q. How is that performed?

A. First dilate the *Sinus*, and remove the *Callus*, as has been taught, and then take a strong Thread of *Silk*, or *Hemp unwhitened*, and put one End of it into the Eye of a small Probe or Needle, of Lead, or Silver, or other thing that will bend; then put the Eye with the Thread thro' the *Sinus* to the *Intestinum Rectum*; then put your Fore-Finger into the *Anus*, and pull the Thread and Probe out of the *Anus*; then make good Deligation, tying the Ends of the *Silk* with a running Knot, that it may be the more easily loosen'd; and so more and more draw

draw in the Ends of the Thread at every dressing, if it may be permitted: And when the *Sinus*, by this way, is wholly divided, proceed in the Cure as has been taught; but remember to put under the Knot a small Boulster of Linen; which will be for the great Ease of the Patient; and without it the Ligature will not be tolerable.



CHAP. XIX.

Of an HERPES EXEDENS.

Q. **W**HAT is an Herpes?

A. It hath its Name à *Serpendo*, from its creeping Quality. There are three Species of it: (1.) A *Simple Herpes*, which is a Pustule of a yellowish inflamed Colour, with a sharp Head; in the Face they appear single, and in other Parts sometimes, and are generally called *Cholerick Pustules*. When they overspread the Back, Sides, or Breast, they are accompanied with an *Erysipelas*, and are then called *Shingles*. (2.) *Herpes Miliaris*; this ariseth in a Cluster of small Wheals, not much differing from the Colour of the Skin: they itch, and being scratched, they weep a thin Water, which drying, a Scab appears at the head of each Wheal, in the form of Millet-Seed, from whence it hath its Name. (3.) *Herpes Exedens*; this riseth in the Skin, in a small Tubercle, on the Top of which appears an *Ulcer* like a *Pin-Hole*, which in Time grows broad, uneven, and sometimes livid, and will heal in the middle, whilst the Brims continue fore.

Q. What is required in the Cure of an Herpes Exedens?

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A. (1.) The Humour which flows to the Part is to be stay'd. (2.) The Humour already in the Part must be evacuated. (3.) Convenient Applications to cure the Ulcer it self.

Q. How is the first performed?

A. By purging the Body well from *thick Choler* and *Bilis Atra*, (if the Ulcer is of a livid Colour) with *Elect. Lenitiv. Pulv. Sanct. Rhab. Sena, Poly-pod. Hermodact. &c.*

Q. How is the second performed?

A. By mixing 3j. *Præcipit. Rub.* washed in Rose-Water with *Unguent. Popul. or Mundificativum Paracelsi* 3j.

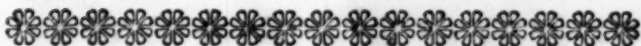
Q. How long is this Medicine to be used?

A. Till the Ulcer spread no more, and look red.

Q. How is the third Intention performed, which is to cure the Ulcer it self?

A. Give inwardly a Decoction of *Sarsaparilla, China, Guaiacum, &c.* and if you perceive the Brims of the Ulcer to erode, further and further, touch them with *Ol. Vitrioli*, or *Ol. Sulph.* Then endeavour to fill up the Cavity by Medicines which strongly dry (yet are not corrosive;) as *Ceruss. & Tutia Præparat. Cort. Pin. cum Unguent. Nicotian. & Liniment. Arcei, &c.* Or *R. Unguent. Enulat. cum Mercur. 3j. Flor. Sulphur. 3j. misce*; which is commended by some: and then cicatrize with *Unguent. Desicc. Rub. &c.* A Simple *Herpes* is cured much like an *Erysipelas*, by Evacuation and Contemperation of Choler; an *Herpes Miliaris* is to be treated much like the Itch, with Catharticks and Alterants. As for local Medicines in a Simple *Herpes*, *Succ. Poligoni, Equiset. Plantag. Litharg. Auri, Ceruss. Ol. Ros. Unguent. Alb. Diapomphol. Nutrit. Popul. &c.* But an *Herpes Miliaris* requires more powerful Exsiccants, and even Mercurials; which may be seen at large in *Wiseman*, in the Chapter of *Herpes, &c.*

C H A P.



CHAP. XX.

Of a PHAGEDÆNA and a NOME.

Q. **W**HAT is a Phagedænic Ulcer ?

A. It is a deep *Ulcer* with tumify'd Lips, corroding the adjacent Parts, produced of a *bilious Humour*, inclin'd to Melancholy, not so thick as that which is the Cause of *Cancers*, nor so thin as that which causes an *Erysipelas* or *Herpes*.

Q. Why is it called Phagedænic ?

A. *φαιδανα* is a Greek Name, derived from φαγω, (in Latin *Edo*) to eat ; so that a *Phagedænic Ulcer*, is *Ulcus Exedens*, or an Eating Ulcer.

Q. What is a Nome ?

A. *Νομή*, or *Ulcus Depascens* ; in English, is a feeding consuming Ulcer, without any Tumor in the Brims, but endued with Malignity and Putrefaction, and Corruption of the Part.

Q. How are these Ulcers to be cured ?

A. Let the Diet be such as affords a good Juice, and is of easy Digestion, and make a reasonable Evacuation by *Catharticks* ; and keep them to a Diet-Drink of *Sarsa*, &c. join'd with some vulnerary Herbs. Dress the tumify'd Brims of the *Phagedænic Ulcer* with *Unguent. Alb. and Popul.* mix'd ; and the Ulcer itself with *Unguent. Nicotian.* ʒj. *Mercur. Præcipitat. Rub.* ʒij. *misce.* But as for a *Nome*, or *Ulcus Depascens*, it requires stronger Medicines than a *Phagedæna* ; as *Vitr. Alb. Croc. Mart. Calc. Viv. Alum. ust. Plumb. ust. Æs ust. &c.*

Q. How long are these Medicines to be used ?

A. Till the Erosion stops, and the Ulcer looks clean and red, then incarn and cicatrize, as has been taught.



C H A P. XXI.

Of a CANCER, and a cancerous ULCER.

Q. *W* *HAT* is a Cancerous Tumor ?

A. It is a *Tumor* proceeding (as Authors say) of *Bilis Atra*, hard, unequal, of a leaden Colour, hot, painful, having full Veins appearing in the Parts adjoining, which imitate the Feet of a Crab, from whence it receives its Name.

Q. *What is the Cause of this Ulcer ?*

A. A very hot Distemperature of the Liver, or Spleen, ill Diet, bad Wines, a hot Air, and sometimes a violent external Force, Grief, &c.

Q. *What Parts doth it mostly invade ?*

A. Altho' it is possible for it to breed in all Parts of the Body, yet it generally seizes either the *Breasts* or *Matrix* of Women, and the Lips and Nose of the Face.

Q. *Why does it rather seize those Parts than others ?*

A. The Breasts more readily receive this Humour, because of their loose and glandulous Substance ; and a long Retention of the *Menstrua*, (whereby the Blood is, as it were, burned) is the reason of its seizing the Matrix.

Q. *What Prognosticks are to be made in this Case ?*

A. (1.) No Cancer is of easy Cure. (2.) When it is come to a remarkable Bigness, it is to be extirpated. (3.) If the Patient be weak, and the *Tumor* very stubborn, (and more especially if it adhere to the Ribs,) tamper not with it, but content your self with *Lenients* ; for if you use either *Knife* or *Cautery* to such, you hasten their End, and bring a Reproach upon yourself. (4.) Never
be

Of a Cancer, and a Cancerous Ulcer. 67

be too large in your Promises of the Cure, where Extirpation cannot be made, especially if it be ulcerate.

Q. What is your Dietetick Method in the Cure?

A. Let them forbear all strong Wines, Cabbage, Cheese, and salt Flesh or Fish; as also all things that thicken the Blood, and inflame the Humours; let their Diet be cooling and moistening; Violet-Leaves, Spinage, Purslain, Sorrel boiled; also Mutton, Veal, Lamb, Pullets, poached Eggs, and Fishes that swim in clear Rivers; and let their Drink be a small Ale, &c.

Q. What is your Pharmaceutick Means?

A. Bleed in the Arm, if it be in the Breast; and in the *Saphena*, if it be in the Matrix; and let it be done at the full Moon: also give *Elect. Lenitiv.* in Whey, or *Rhab. Sen. Pulv. Sanctus*, &c. once a Week.

Q. What is the Chirurgical or Topical Method?

A. In a Cancer there is a double Poison, a Putrefactive and Corrosive: Now, if you use such Medicines as suppurate other Tumors, you will bring Putrefaction; and, if you apply Corrosives, you assist the Poison, and increase the Malady.

Q. What are then best?

A. Those which repel and digest; but shun all Emplaisters, for they pen up the Humour by shutting the Pores: You may use *Succ. Nigel. Unguent. Popul. Favin. Lupinor. Secale, Succ. Symphit. Equiset. Plantag. Millefol. Tapsus barbat.* &c. made into Cataplasms. Also *Limac. & Succ. Heder. Terrest.* is accounted a good Cataplasm; but if the Tumor be very painful, apply *Rad. Cicut. Farin. Secal. & Ol. Myrtillor.* mixt into a Cataplasm. Also, *Ex Ol. Cydonior. ʒiv. Acet. Sambuc. ʒij.* and mix them well in a leaden Mortar; with either of which dress the Tumor twice a Day: But some use only a Plate

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of Lead, rubb'd over with *Argent. Viv.* and so apply it to the Part. And thus far of a *cancerous Tumor* not ulcerate.

Q. *What is a Cancerous Ulcer?*

A. It is known by these Signs, (*viz.*) thick Lips, a stinking Smell, the Lips are turned outward, greenish, and fretted, yielding a *Sanies* of a black or dark yellow Colour, and is extremely painful.

Q. *What Differences are there found in these Ulcers?*

A. Two; (*viz.*) *Lupus*, and *Noli me tangere*; the former is in the Thigh or Leg, and the latter in the Face: but in any other part of the Body it carries its own proper Name of a *Cancer* only: There are some Cheats that go about, to gull charitable People out of their Money, by pretending to have a *Lupus*, or Wolf alive in their Breasts, that they are forced daily to feed with raw Beef, &c. Beware of such Impostors, and expose them, for such a thing is altogether impossible, and unbecoming a Surgeon so much as to name, unless by way of Contempt.

Q. *What Method must be used in the Cure?*

A. The same that was prescribed in a *cancerous Tumor*, (as to Phlebotomy, Diet and Purgings.) To the Ulcer apply Cloths wet in *Succ. Solan. vel. Nicotian. Angl.* or in *Aq. Sperm. Ranar.* in which is dissolv'd *Sacc. Saturni*; especially if the Cancer be not ulcerate. Also *Plumb. ust. & lot. Tutia, Ol. Ros. Cerae, Succ. Solan. &c.* beat up in a leaden Mortar, to the Consistence of an Unguent, and applied, &c.

Q. *Will these Medicines serve in all cancerous Ulcers without Distinction?*

A. No; they only serve to allay the raging Pain in large and deep Cancers, and to put a stop to their Increase;

Of a Cancer, and a Cancerous Ulcer. 69

Increase ; but if it be only superficial, it may be eat out with *sublimed Arsenick*, as some Men have taught : But this is a very dangerous Attempt ; and we never met with any such Application that succeeded, and shall hardly ever make the Experiment.

Q. But suppose this Grief happens in the Matrix?

A. Then use this Medicament, ℞ *Stercor. Bubul. ℥iv. Herb. Rob. Plantag. Semperviv. Hyosciam. Portulac. Lactuc. ana Mj. Canc. fluo. N^o. xij. Contund. omnia ; & distil. in Alemb. Plumb. Imbuet. Camphora, & injiciatur frequent.*

Q. How is a Noli me tangere cured ?

A. ℞ *Vitriol. ℞iss. Auripigment. Sulph. Viv. ana ℥iv. Sal. Gem. ℥iij. cum Aceto fiat pasta in olla terrea probe lutata, siccetur in furno.* This, by divers Applications, will consume this, and other Cancers : And then digest, deterge, and incarn, and then cicatrize with this ; ℞ *Mel Dispumat. ℥ij. Sevi. Hircin. Limat. Chalyb. ana ℥iss. Litharg. Aur. ℥ij. misce.*

Q. But if, notwithstanding all your Endeavours, it still increases, what must be done ?

A. Warn the Patient of the present Danger, and propose Extirpation.

Q. What ought to be look'd to, in order to have it succeed well ?

A. (1.) That the Patient be strong, and of a good Habit, and not too old, nor the *Menstrua* ceased. (2.) That the Cancer be loose, and the *Axilla* free from painful Glands. (3.) That it be extirpated in the Spring or Autumn, &c.

Q. How is it to be performed ?

A. Let the Patient be placed in a clear Light, and held steady, and dexterously pass two Needles made for that Purpose, thro' the Breast cross-ways, over which pass Tape from one to t'other,
for

70 *Of a Cancer, and a Cancerous Ulcer.*

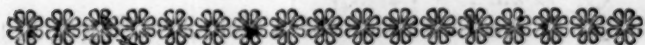
or Hold for your Fingers; by which pull it to you with one Hand, and, with the other, nimbly make Incision, and cut it off as close to the Ribs as possible, that no Parts of it remain behind. But if any *cancerous Gland* should remain, be sure to have actual Cauteries of different Sizes ready hot by you, to consume it, and to stop the Bleeding; or otherwise apply, for restraining the Hemorrhage, Dorsels dipt in scalding-hot *Ol. Terebinth. per se*; or Buttons dipt in the same; first arm'd with the common Restrictive, and so laid to the Mouths of the Arteries; and over all, Pledgets armed with the same: then after good Boulstering and Rolling, conveniently place the Patient in Bed, and at Night give her an *Anodyne Draught*. But the most certain and decent way is, to make a Ligature on the Ends of the Arteries, and then you are safe from a Hemorrhage, beyond all dispute. Then the second or third Day open it, digest, deterge, incarn, and cicatrize, as in other Amputations; keep the Body soluble, and take care to prevent a Fever: Also now make one or more Fontanels; for if any evil Quality remains in the Humours, the Ulcer will hardly cicatrize.

Q. But if notwithstanding, the Lips do grow callous, what will you do?

A. Then timely attempt their Eradication, by actual Caution, lest you repent it when it is too late.

Q. But is there no other Way, but this frightful one?

A. Some pretend to do it by Causticks, but it is so often to be repeated, before it can have its Effect, that the Remedy proves worse than the Disease,



C H A P XXII.

Of a Discoloured, and Varicous ULCER.

Q. **W**HAT are the unnatural Colours which possess an Ulcer?

A. They are in Number four; (*viz.*) red, yellow, livid, and black.

Q. What is the Cause of these?

A. Either Blood offending in Quantity or Quality, or too hot, or from too hard Bandage, or by surfeiting, by solemn Evacuations suppress'd, and by things apply'd too cooling, &c.

Q. How will you remove the red Colour?

A. The Diet must be cooling and moistening, let his Rollers be dipt in *Acet. Rosar.* and *Aq. Font.* and not rolled too slack; avoid violent Motion, provoke natural Purgation, if suppress'd: Blood is to be drawn, if it abound, and the Part is to be scarrified, &c. if needful.

Q. How is the livid Colour to be removed?

A. If it proceed from Cold, which you may easily perceive, make use of such Medicines as are able to reduce the Part to its natural Heat, made *ex Rad. Rapi, Raphani, Pulv. Caryoph. Ol. Lini Vet. q. s. & fiat Cataplasma.* And, if need be, use Scarrifications, Cupping-Glasses, &c.

Q. How is the black Colour to be removed?

A. Scarrify the Parts deep, and foment them well, and treat it as the beginning of a *Mortification*; and if either of these Accidents happen to an Ulcer, let them be treated as here directed, till the Part comes to its natural Colour; and then go forward, as has been taught in the Cure of compound Ulcers.

Q. What

72 *Of a Discolour'd, and Varicous Ulcer.*

Q. What is a Varix ?

A. It is a Dilatation of a Vein, causing a Tumefaction of it, with Windings and *Tortuosity*, arising in some part of the Body.

Q. Why is it called a Varix ?

A. From the Likeness it bears to the *Protuberances*, which are seen in *Trees* above the *Bark*, called *Varices*.

Q. Whence are they caused ?

A. Either from Blood impregnated with Spirits, or from melancholy Blood, or thro' Excess of Labour, or immoderate Exercise.

Q. How are they to be cured ?

A. By discharging the Body of the offending Humours, and by manual Operation ; shun gross Meats ; open a Vein, and give Lenitives, mixed with such as purge gross Humours, as, *Lenitiv. Elect. Pulv. Sanct. &c.*

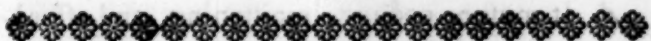
Q. How is their Chirurgical Cure to be performed ?

A. By *Ustion*, by *Excision*, and by taking up the *Vein*.

Q. How are these done ?

A. As to the first two, they are so painful and terrible, that scarcely any Man would undergo the Operation ; therefore I shall speak nothing of them : but as for taking up the Vein, it is thus done ; Take up the *Varix*, both above and below, in both which Places make Deligation, and open the Vein between them, that the Blood may be discharged out of it, &c. and wait the Separation of the Ligatures, and heal as in other Wounds.





C H A P. XXIII.

Of ULCERS of the hairy Scalp.

Q. **W**HAT is an Achor?

A. It is an ulcerous Tumor of the Skin of the Head, red and *Dug-like*, having very small Holes, from whence proceeds a thin *Sanies*.

Q. *What is a Favus?*

A. It is the same, yet wherein the Holes are larger, and which contains an *Humour resembling Honey*, from whence it is denominated.

Q. *From whence is it caused?*

A. The *primitive Causes* are, corrupt Nourishment and Contagion, and by *Contact* and frequent Conversation; the *material Cause*, is a sharp, fretting, viscous Humour; and the *conjunct Cause*, is the same Humour *impacted* in the Skin of the Head.

Q. *What are the Signs?*

A. In both *Achor* and *Favus*, there is an itching and a Tumor with Holes, and tho' often both are attended with Lice, yet it is proper for a *Favus* to have Scales.

Q. *What are your Prognosticks?*

A. If they continue long, they leave behind them a Baldness of the Part; but those Children who have it, are freed from the Falling Sickness; and if it be *hereditary*, it is very hardly cured at all.

Q. *What are the Means of Cure?*

A. A convenient Diet, Phlebotomy, Purgation, and proper Applications to the *Ulcers*.

Q. *What*

Q. What Diet is most proper?

A. It must be cooling, moistening, and affording a laudable Juice; but all strong, sweet Wines, sharp, salt Meats, hard Eggs, Fishes living in muddy Water, and Purslain, are to be shunn'd. As for Phlebotomy, it must be prescribed and repeated; if there is a *Plthora*, or if much corrupt Blood is settled in the Vessels of the Head, purge with *Confect. Hamech. Syr. Ros. solut. cum Agarico, Pulv. Sanct. Troch. Albandal, &c.* Purge with some of these once a Week: Also *Sternutatories* may be used, if it be thought necessary.

Q. What are proper external Applications?

A. They must be such as are astringent and repelling, which we discoursed of in the Doctrine of Tumors. *Butyr. Recent. Axung. Porcin. Sulph. Viv. Helleb. alb. & nigr. Calc. Viv. Merc. Crud. Litharg. Gallar. Alum. Acet. Ol. Vet. Pic. Liquid. &c.* Pull out the Hairs, then foment with a Decoction of *Vin. Rub. Cort. Granat. Bacc. Myrtillor. Fol. Ros. Rub. &c.* and then apply your Unguents.

Q. Are these Medicines to be used indifferently to all?

A. No: But to Children apply the milder sort; and in all, proportion things according to Art.

Q. But suppose the Ulcers be very moist, and apt to be inflamed by the Application of unctuous Medicines?

A. Then instead of *Axung.* or *Butyr. Rec.* make up your Medicines with *Oxymel Simplex*, and absterfive Powders, and *Farin. Hordei*, and over them a *Cap of Ivy-Leaves* sewed together.

Q. What is that Ulcer of the Head which is called Tinea?

A. It is a crusty fretting Ulcer of the Skin of the Head, without very much Moisture, corrupting the Roots of the Hair, and sending from the Skin

Skin a dry stinking Filth, which is commonly called a *Scall'd Head*.

Q. From whence is it caused?

A. Either from things not natural, or corrupt Milk, or Contagion, or else is hereditary.

Q. What are the Signs of this Disease?

A. It is known by its dry crusty Scales, which are sometimes yellow, sometimes Ash-colour'd, or greenish; but most commonly white, and never altogether black.

Q. What are the Presages of the Disease?

A. (1.) It is very hard of Cure. (2.) If the Skin be hard, and many Scales appear, and the Hair falls away, it is of most difficult Cure. (3.) When it is cured, it often leaves behind it Baldness. (4.) The older they are, the harder of Cure.

Q. What Indications offer themselves in the Cure?

A. (1.) To remove the Cause: And, (2.) to cure the Ulcer by *proper Means*: The first is done by rightly ordering the Non-naturals, by *Catharticks* and *Phlebotomy*, as was directed in an *Achor* and *Favus*; only remember to add *mercurial Preparations* to your *Catharticks*, and repeat *Phlebotomy* at least once a Quarter, or oftner if it be necessary.

Q. How is the Ulcer to be cured?

A. Take care to avoid meddling with tender Children, until they are able to bear sharp Medicines; but in the Interim, that something may be done, you may apply to the Part, a Liniment *ex Ol. Ovor. Croc. Martis & C. C. C.* and lay over it a Cap of Ivy-Leaves; but apply *Repercussives*, for the Humour is so thick that it cannot be repell'd.

Q. How will you proceed?

A. First, Procure the Separation of the Scale: Secondly, Pull out the Hairs by the Roots; and Thirdly, Heal the Ulcer.

Q. How

Q. How will you cause the Scales to fall off?

A. By Unguents made *ex Ol. Ped. Bor.* and Mucilages *ex Rad. Altheæ, Sem. Lini & Fœnugr.* &c. And I have known where, green Ellicampane-Roots, boil'd tender, pith'd and pulp'd through a Sieve, and mixed with a fourth part of Hog's-Lard, have been used with great Success; being daily anointed on the Part.

Q. How will you then cure the Ulcers?

A. Either with Unguent. *Enulat. cum Merc.* and over it *Empl. de Ranis cum Merc.* Or *℞ Succ. Fumar. Oxylapath. Acet. ana ℥iv. Ol. Vet. ℞j. Coq. omn. ad Succ. Consump. & adde Pulv. sequent. ℞ Helleb. alb. & nigr. Sulph. Viv. Calc. Viv. Alum. Gallar. ana ʒss. Virid. Æris ʒij. Pic. Liquid. ʒifs. Ceræ q. s. fiat Ceratum,* and apply it. And, while this is doing, purge once a Week; which is all we need discourse of, with relation to this Distemper, being in every Chapter confined to Brevity; our Design being only to give the young Artist a rational Idea of his Art, without a Multitude of Words.





CHAP. XXIV.

Of ULCERS of the Ears.

Q. *W*HAT is the Cause of Ulcers in the Ears?

A. A Blow, a Fall, or a sharp Humour sent from the Brain.

Q. *What are the Prognosticks in this Case?*

A. (1.) If the Cure be neglected, Deafness ensues. (2.) If greater Plenty of Matter comes forth, than it is reasonable to suppose the Ears can produce, then you may be sure, that the greatest part of it comes from the Brain. (3.) If before the Matter comes out, the Patient feels great Pain and Pulfation, it certainly proceeds from a *Phlegmon* bred there.

Q. *How will you proceed in the Cure?*

A. Before any thing be applied, purge the Head with *Pil. Coch. maj.* or *Pil. de Aggregativ. Diagrid.* &c. (2.) Let the Applications be neither too hot, nor too cold. (3.) Let them be all liquid. (4.) After dressing, let the Patient for some time lie upon the well Side, the diseased Ear being stopped with Wooll. (5.) Avoid all oily and fat Medicines.

Q. *What local Medicines will you use?*

A. *Crocus Martis*, boil'd strongly in *Aceto*: Also *Fol. Alchimil. Sigil. Solomon. Plantag. Equiset. &c.* boiled and made into a Syrup; which will be the better by adding *Cort. & Flor. Granat. Sumach. Bacc. Myrtilor. & Fol. Ros. Rub.*

Q. *How will you know if the Ulcer have Worms in it?*

A. By

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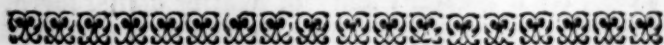
A. By their Motion they will cause intolerable Itching.

Q. *What will you dress with in such a Case?*

A. With a strong Decoction, *ex Cerevis. non lupulat. & Fol. Nicotian.*

Q. *What must be done if a Fungus rises, and fills up the Cavity of the Ear?*

A. (1.) Purge the Head. (2.) Consume the Fungus by a careful Application of *Realgar. alb. Auripigment. & Calc. Viv. ana p. æ.* (3.) Inject into the Ear, *Vin. Alb. Mel. Rosar. & Ægyptiac.* (4.) To heal it, inject some vulnerary Syrup in *Aq. Plantag. or Ros. Rub.*



C H A P X X V.

Of an O P H T H A L M I A.

Q. **W** H A T is an Ophthalmia Vera?

A. An Inflammation of the *Tunica Adnata* of the Eye, attended with Tumor, Pain, Heat, flowing of Tears, the Eye-lid is turned up and somewhat ulcerate, &c.

Q. *What are its Causes?*

A. Either a Blow, a Fall, or sharp Humours, or Oil, Smoak and Dust.

Q. *What are the Differences of an Ophthalmia?*

A. They are either Mild or Malignant; the Mild is when only the *Adnata* is inflamed; the Malignant, when it seizes it with the other Symptoms before-mentioned.

Q. *Why should Oil cause this Disease?*

A. Because it cleaves fast to the Tunics, stops the Pores, and so keeps in the Heat and inflames the Eye; and the Heat, being pent in, burns when it

it cannot breathe through, and inflames the Humours, and so causeth an *Ophthalmia*.

Q. *What are the Prognosticks?*

A. That coming from an external Cause, is more easily cured than that of an internal one. If a Pain in the Head is joined with it, and it continue long, Blindness may be feared. (3.) If the Humour be thick, it will not continue long. (4.) If the Matter be very much and thin, it is like to continue long.

Q. *What are the Intentions of Cure?*

A. A proper Diet, Phlebotomy, Purgation, Collyriums, and a Seton, or Fontanel.

Q. *What particular Rules are to be observed?*

A. He must be sparing in Meat and Drink, abstain from *Venery*, and keep the Body soluble; let his Sleep be moderate, and the Room kept dark; let the Objects he looks on be green: if his Hair be on, cut it off; and, if Strength will permit, bleed him; or if not, apply Cupping-Glasses to his Shoulders; and, to stay the Fluxion, apply a strong *Defensative* to the Forehead and Temples.

Q. *Of what Qualities must your local Medicines be?*

A. Something astringent, cooling and anodyne; as, *Aq. Alb. Ovi*, *Mucilag. Sem. Cydonior.* *Fœnugrec.* &c. drawn with *Aq. Plantag.* Or, *Aq. Rosar. cum Minim. Croc.* Also, *Troch. Alb. Rhas. sine Opio, dissolv. in Aq. Sperm. Ran.* Or, *Aq. Euphrasiæ cum Pulv. Tutie,* &c.

Q. *But suppose this does not do the Work?*

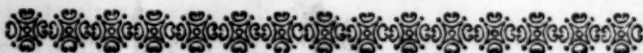
A. Then apply Cupping-Glasses, and make a Seton in the Neck, and purge and bleed, as has been directed.

Q. *What is the Tunica Adnata?*

A. It is the outmost Tunicle of the Eye; it springs from the *Pericranium*, and is spread over
all

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all the White of the Eye, above the *Sclerotica*, reaching as far as the *Iris* ; by which the Eye is kept firmly within its *Orbit*, and from whence it is called *Conjunctiva* : It is of most *exquisite Sense*, and has many *capillary Veins* and Arteries creeping through it, which appear very plain in an *Ophthalmia*, or Inflammation of this Tunicle.



C H A P. XXVI.

Of the rest of the ULCERS of the Eye.

Q. *WE have said enough with relation to an Ophthalmia ; inform me now what other Ulcers the Eye is subject to : And first name the mild ones ?*

A. They are in number seven, four superficial ones, and three deeper : The first is called in Greek *ἄχλὺς*, *Achlys*, in Latin *Caligo*, in English a *Mist* ; it is a very superficial Ulcer, of a bluish Colour, possessing the greatest part of the Black of the Eye. The second is called *νεφέλαιον* in Greek, in Latin *Nubecula*, in English a *Cloud* ; this is deeper, but narrower, and whiter than *Caligo*. The third is called *ἀργεῖμον* ; it is an Ulcer growing about the *Iris* ; possessing part of the White and part of the Black of the Eye ; without the *Iris*, it looks red ; and within it, white. The fourth superficial Ulcer is called *ἐπικαύμα* ; this makes the *Cornea* rugged, and of an Ash-colour, resembling a Lock of Wooll. And now the fifth Ulcer, (which is the first of the deeper sort) is called *βόθριον* in Greek, and *Fossula* in Latin ; it is a hollow, narrow Ulcer of the *Cornea* without Filth ; it is like a Puncture, or *Dint*. The sixth is called *κρίδαμα* ;

the same with *Fossula*, only it is something wider, and not so deep. The last *Ulcer* of the *Cornea* is called ὀφθαλμία, *inustio*; it is an impure and crusty *Ulcer*, thro' which the Humours of the Eye sometimes come out, and then it is called *Procidencia*: Of which there are four kinds; as, (1.) If it fall out but very little, it is called *Caput Muscæ*, and *Formicalis*, the Head of a Fly, or Pismire. (2.) If it fall down yet more, and equal a Grape in Bigness, it is called *Uvea*, or *Uvatio*. (3.) If it falls down yet more, and hangs down like a little Apple, it is called *Malum*, or the Apple-like Rupture. (4.) But if it fall down, and grow hard, brawny and flat, it is called *Clavus*, or the Nail-like Rupture.

Q. How are these to be cured?

A. These four last are altogether incurable; only the Apple-like and Grape-like Rupture, if the Roots are small, may by Ligature be taken off, but the Sight is not to be restored.

Q. How will you proceed in the Cure of the rest?

A. Proceed as directed in the Cure of an *Ophthalmia*; let your *Catharticks* be gentle, and avoid any thing that may cause *Vomiting*; and as to local Medicines in superficial *Ulcers* of the *Cornea*, let them be such as these: *Succ. Rutæ*, *Chelidon.* *Euphrag.* *Sacc. Cand.* *Aloes*, *Sarcocol.* *Fel. Capon.* *Croc.* *Metallor.* *Camphor.* *Tutia*, &c. But if the *Ulcers* be of the deeper sort, then use such as these: *Plumb. Ust.* *Antimon. Æs Ust.* *Gum Arabic.* *Croc.* *Angl.* *Opium*; in *Aq. Ros. vel Plant.* &c. And dress the *Ulcer* four times a Day, and purge once a Week; and a right use of the Non-naturals must be enjoined. Let the Drink be small Beer, the Food of easy Digestion; avoid baked and fried Meats, and all strong Spices, Mustard, Garlick, Onions, Pease and Beans; and, instead of com-
mon

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mon Salt to your Meat, use this, *R Flor. Euphrag. Sem. Fœnicul. ana ʒj. Cinam. & Mac. ana ʒj. Sal. Com. ʒj. misce, fiat pulvis.*

Q. What Ulcers of the Eye do you call Malignant?

A. There are in Number five, three contagious, and two not contagious; (*viz.*) *Carbunculosa, Venerea, Morbillofa, Nome, and Cancrofa.* The *Nome* sometimes begins at the Corner of the Eye, sometimes at the White, and sometimes at the *Cornea*; this *Ulcer* is dangerous, and seldom cured without loss of Sight. *Ulcus Cancrosus* has a thin darkish Humour proceeding from it, is very painful, and incurable; all that can be done, is to give the Patient some Ease by Anodyne Cataplasms and *Collyriums*, and a strict Course of Living.

Q. How will you conjecture when the Small-Pox is like to produce Ulcers in the Eye?

A. If there was an Inflammation in the Eyes, before any Pocks appeared in the Body; if he feels a great Pain in his Eyes, and cannot open the Lids.

Q. What is to be applied in such a Case?

A. Mucilages of *Sem. Cydonior. Lini, Fœnugrec. &c.* made with *Aq. Rosar. or Lac Mulieb.* with Saffron in it.

Q. But suppose these Ulcers proceed from a Venereal Cause?

A. First cure the Pox, and these Ulcers will vanish; however, as something in the mean time must be done, *R Vin. alb. ℥j. Aq. Plantag. ʒvj. Auripigment. ʒij. Virid. Æris ʒj. Aloes, Myrrh. ana ʒj. fiat Collyrium, &c.*

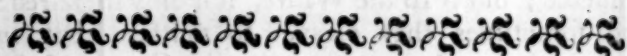
Q. But if through Neglect, or Ignorance, the Eyelid grows to the Conjunctiva or Cornea, what must be done?

A. This is called in Latin, *Coalitus*: If the Lid cleaves to the Black, the Sight is altogether hindered;

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hindered; but if to the White, it is only impaired: and sometimes they cleave to neither, but to one another. And now as to the Cure; if the Eye-lid cleave to the *Cornea*, against the *Apple* of the Eye, the Sight never will be perfect again. But in attempting the Cure, proceed thus; Place the Patient in a convenient Posture, and lift up the Eye-lid which cleaves to the Membranes, and put between it and the Membrane, in that Part which is free, a fit Instrument, blunt on the back part, and very sharp before, and the Point armed; then artificially and dextrously separate the Parts united, taking care not to hurt the Eye: Then apply a *Collyrium*, *ex Aq. Plant. & Troch. alb. Rhaf.* and keep the Parts asunder with small Dorsels of Lint, put between the Parts disjoined, and wet Boulsters in the *Collyrium*, and apply over all, and roll him up: Dress it twice a Day, and continue this Method till it is whole.





C H A P XXVII.

Of an OZÆNA.

Q. WHAT is an Ozæna?

A. It is a malignant *Ulcer* in the Nostrils, about the Holes of the *Ethmoides*, caused of sharp Humours eroding the Parts, attended with a stinking Smell, and sometimes with Crusts.

Q. What are the *Prognosticks* in an Ozæna?

A. (1.) They are all hard of Cure. (2.) That which is hid, is of a harder Cure than that which appears.

Q. Why are they hard of Cure?

A. (1.) Because the Brain sends plenty of corrupt Humours. (2.) Because the Part is of a moist Nature.

Q. How is such an Ulcer to be cured?

A. By observing a good Diet, as in other *Ulcers* has been taught, and by Phlebotomy and Purging; and lastly, by fit Applications.

Q. What think you of *Mercurial Preparations*?

A. They are most effectual in the Cure of this *Ulcer*, whether it be simply of it self, or a Symptom of the *Pox*.

Q. Well; but what are your local Medicines?

A. I will first endeavour the Removal of the Crust, which is fixed in the fore-part of the *Os Ethmoides*, or *Os Cribriforme*; which I do thus: I turn the Patient's Face upwards, and his Head bent back; then with a Feather, I drop in warm, Morning and Evening, *Ol. Amygd. Dulc. & Sperm. Ceti* mix'd, and let him at the same time draw in his Breath, till he feels the Taste of it in his Mouth;

Mouth ; and this Method I continue every Day, till the Crust is soft ; which, when I find it is so, I then, (after dropping in the Oil) at every Dressing, cause him to snuff some *sternutory Powder* up his Nose, which, by causing him to sneeze, will force out some of the loose Crust : Which Method I daily use till all is discharged ; then, instead of the Oil, use a Composition made of some of these Medicaments, *Aq. Plantag. Fol. Querci, Alum. Balaust. Spir. Vitriol. Mel. Ros. Syr. Ros. Sicc. &c.* Which must be injected warm twice a Day ; and after Injection, that the Part may not soon become dry, apply some fit Unguent : as *Unguent. Tutie alb. Camph. ana ʒss. Mercur. Dulcis, ʒj. misce, &c.* Which Method, if rightly followed, will answer your Desires, without applying the actual Caution.

Q. What is the Os Ethmoides, where you say the Seat of an Ozæna is ?

A. It is sometimes called *Ethmoides*, and sometimes *Os Cribriforme*, indifferently : It is the second common Bone of the Scull and upper Jaw : It is seated in the *middle Basis* of the Forehead, at the top of the Nostrils, and join'd by a *Suture* to the *Os Frontis* ; it, like a Sieve, hath many Holes, by which the *Filaments* of the *Olfactory Nerves* pass into the Nostrils, &c.





C H A P. XXVIII.

Of ULCERS of the Mouth.

Q. **W**HAT is to be done when the wrinkled Skin which covers the Os Palati is ulcerate ?

A. Scarce any thing is more certain and speedy, than this common Medicine of *Mel. Rosar. & Alum. ust. ana q. s.* Or, *Aq. Plantag. & Mel. Rosar. cum Ol. Sulph. q. s.* And afterwards heal with *Syr. è Ros. Sicc. & Spir. Vit. q. v.*

Q. But suppose the Os Palati is bare ?

A. Then to the former Syrups add some *Pulv. Sarcocol. Irid. Mastich. Far. Hord. &c.*

Q. What must be done if a Piece of the Os Palati fall away ?

A. If it is but a small Piece, you must keep the Brims of the Ulcer raw, and use the Incarnatives here prescribed, and Union may be procured ; but if a large Piece come away, all Hopes of Union are gone ; and all that can be done, is, to cause the Patient to wear a Plate of Silver to supply the Defect.

Q. If the Tongue prove ulcerate, what will you apply ?

A. If it be mild, a Decoction of *Hord. Gallic. Alibea, Liguorit. &c. cum Syr. Violar.* may serve ; but if the Ulcers be malignant, as sometimes this Part is seized with a *Phagedæna* and *Nome*, be sure to administer in Time *Merc. Dulcis*, in fit Doses, and often repeated, and apply'd to the Ulcer also : And as to the rest of the Cure, it may be gathered from what is already delivered in the Chapter of *Phagedæna, &c.*

Q. What

Q. What is your Method in Ulcers of the Uvula?

A. If they be mild, those things prescribed in Ulcers of the Tongue may suffice; but if the Ulcer be fretting, it is either to be cured by *Excision*, or by fit Applications; (*viz.*) make a Gargle, *ex Fol. Plantag. Veronic. Sigil. Solomon. Scord. & Origan.* In which dissolve *Mel. Anglic. q. v.* And after gargling, touch the Ulcer with *Mel. Rosar. Alum. ust. & Ægyptiac.* warm; and do this twice a Day till it be well.

Q. But if you find it proves rebellious, and yields to no Applications, how must it be cut off?

A. First purge the Body; and if the Uvula be small about the Root, it will be so much the better (nay, indeed it will not be safe without it;) then with Scissors, or other fit Instrument, cut it off, and cauterize the Part with a red-hot Uvula Spoon, or other fit Instrument, to restrain the Flux of Blood, &c.

Q. If the Tonsillæ, or Almonds, be ulcerate, how are they to be cured?

A. Make an Electuary, *ex Rad. Irid. Florent. Cent. min. Myrrh. & Mel. dispumat.* and be often applying it. And if the Throat be ulcerate beyond the Uvula, *R. Aq. Limat. Ferri & Plantag. ana ℥ss. Flor. Ros. Rub. Balaust. ana ʒvj. Alum. Rup. ʒij. Digerant. in Arena per Hor. xxiv. & Coletur prousu:* And give *Mercur. Dulc.* inwardly, as you see Occasion. And if they are hard, and much tumified, and in a long time yield to no Applications; but are troublesome, and apt to choak the Patient; the readiest way is *Excision*: which is not difficult to do, with the Probe-Scissors, if Ligature be made on the Part; and the Hemorrhage may be readily stopp'd with a Gargarism of Oxidate, or by applying gently a Cautery-Button.



C H A P. XXIX.

Of WOUNDS.

Q. **W**HAT is a Wound?

A. It is *properly* a Solution of Continuity in any Part of the Body, caused by an external cutting Instrument; it is in Greek called τραῦμα, in Latin *Vulnus*.

Q. How many Intentions are there in the Cure of a Wound?

A. Five; viz. (1.) To draw forth any extraneous Body. (2.) To bring the Lips together. (3.) To retain the same. (4.) Preserving the Tone of the Part. (5.) To correct Accidents that have already seized on the Part, and to prevent others.

Q. What do you term Extraneous Bodies?

A. Shot, Hair, Rags, Dirt, Gravel, Splinters, or whatever is foreign to the Part wounded; which are to be extracted with that Variety of Instruments, that the Nature of the Body and Position of the Member requires.

Q. Is this a general Rule without Exception?

A. No: For where you see the Wound is of itself mortal, and where it cannot be done but with great Pain and Difficulty, and where the Wound may be cured without it, or leaden Bullets lodged deep in the great Joints, in these Cases Extraction is not to be attempted.

Q. Which way are extraneous Bodies to be extracted?

A. By the same way they went in, except there is more fear of a Flux of Blood, or cutting a Nerve,

Nerve, by the Extraction that way than on the contrary Part; or that the Figure of the extraneous Body is such, that it will not so easily pass back the same way it went, as it will through the Part opposite.

Q. How is bleeding in a Wound to be stopped?

A. (1.) By restraining Medicines, as *Pulv. Galeni, Bole, &c.* mixed with *Posca*. (2.) By Deligation of the Vessel. (3.) By Injection of astringent Medicines, when we cannot come at the Vessel. (4.) By the actual or potential Cautery. (5.) By good Compress and Bandage.

Q. How many sorts of Union are there in a Wound?

A. Two; (*viz.*) *Symphisis*, and *Syssarcosis*.

Q. What is Symphisis?

A. It is the Union of Parts disjoined, no middle Substance coming between; and this is called healing, by the first Intention.

Q. What is Syssarcosis?

A. It is the Union of Parts disjoined by a middle Substance.

Q. How are the Parts disjoined, brought together, and retain'd so.

A. By stitching the Wound, and by good Bandage.

Q. How is the Tone of the Part to be preserved?

A. (1.) By a right ordering of the Non-naturals. (2.) The Medicines may not exceed in any Quality; (*viz.*) either hot, cold, moist, or dry. (3.) Bandage must be uniform, and neither too hard nor too slack. (4.) Take care, by a spare Diet, Lenitives, and Phlebotomy, to keep the Body from a Fever. (5.) Let them abstain from *Venery*.

Q. What are reckon'd Accidents in a Wound?

A. Pain, Inflammation, Convulsion, and Mortification.

Q. *How are these corrected?*

A. As for Pain, if it proceeds from any external Cause, as hard Bandage, extraneous Bodies, &c. it is to be remedied by *loosening* the one, and *extracting* the other; but if from neither of these, then *Anodynes* are to be apply'd, such as have been already prescribed. *Inflammations* are remedied by Phlebotomy, Lenitives, and cooling Applications. In *Convulsions*, recourse is to be had to *Unguent. Martiat. Ol. Succini, Juniperi, Spir. Castorei, Savie, Lavendulæ, Ol. Rutæ, Lumbricor. Vulpin, &c.* Some apply'd to the Part, some given at the Mouth, some by Clysters, and some smelt to. And a *Mortification* is remedied by Scarrification, Fomentation, *Ol. Terebinth.* scalding hot, *Spir. Vin. Egyptiacum, Mercur. Præcipit. Rub. &c.*

Q. *What sort of Wounds are to be cured by Symphisis, or Agglutination?*

A. All, whose Lips can conveniently be brought and kept together, by *stitching* and *rolling*, and where there is no great Contusion, nor loss of Substance.

Q. *What is to be observed when you come to stitch a Wound?*

A. (1.) Let it be done gently. (2.) Let the Parts be equally brought together. (3.) If the Brims be stiff, by reason of long being undress'd, let them be fomented with *Hydrelæum*. (4.) No *Dorsel* nor *Pledget* must be put between the Parts.

Q. *What is Hydrelæum?*

A. Oil and Water mixed, according to discretion.

Q. *How many sorts of Stitching are there in common use?*

A. Two; (*viz.*) *Lequeatio*, or dry Stitching, and *Sutura*, or Stitching with a Needle.

Q. *What is dry Stitching?*

A. It

A. It is when Pieces of Cloth, cut *jagged*, or *Saw-like*, being placed on each side of the Wound, are stuck on, by a fit Medicine, and so the dis-joined Parts are brought together; and the Pieces of Cloth being sewed to each other over the Wound, keep it in a *uniting Posture*, without passing a Needle through the Flesh or Skin.

Q. In what Cases do you apply the dry Stitch?

A. (1.) If we cannot come conveniently to roll the wounded Part, as in all transverse Wounds. (2.) In Wounds of the Face, to avoid a Scar. (3.) If the Patient will not admit of Stitching.

Q. How is the Cloth to be prepared?

A. (1.) The two Pieces must exactly answer to one another. (2.) Let them be either doubled or hemm'd. (3.) Let them be strong, that they yield not to the Stitch.

Q. By what Means are these Cloths made to stick?

A. Dissolve *Ichthyocolla* in *Aceto*, & *coq. ad Consist.* *Empl.* Or Medicines may be formed *ex Farin. Volat. Mastich. Gipsi, Gum. Tragacanth & Arabic. Bitumen, Colophon, Albumen Ovi, &c.* These spread upon the Cloths, must be apply'd and suffer'd to dry on, before they be stitched; that they may not give way, and let the Stitches be about an Inch asunder. You may compound your Matter for the *dry Stitch* thus: *R Pulv. Bol. Ver. & Mastich ana 3j. Thuris pinguid. 3iss. Taccamahac. 3ij.* Mix them well with a hot Pestle and Mortar, and spread it, and let it lie on some time for it to stick well, before you stitch the Cloth.

Q. How many ways are there of Stitching with a Needle in Wounds?

A. First, the *Glovers Stitch*, which is used in the wounding Guts, &c. The second kind is performed by taking divers Stitches, as far distant, as the Nature of the Wound requires, and at every

Stitch to cut the Thread. The third is called *Gastroraphia*; this is made use of when the *Peritoneum* is divided by a large Wound, (and shall be discoursed of, when we come to treat of Wounds of that Part.) The fourth is, when the Needle is left in the Wound, being passed thro' both Parts, and the Lips brought close together, and the Thread passed about both Parts, *as when a Taylor fastens it on his Sleeve*: And this sort of Stitch is of use in *Hare-Lips*, and in Wounds of the *Aspera Arteria*, or Windpipe; but if you see fit, the Ends of the Needle may be snapped off.

Q. *Of what use is Stitching in Wounds?*

A. To keep the Lips of them close, in order to their speedy healing, and to restrain their bleeding.

Q. *What is to be observed in Stitching?*

A. (1.) Beware of Nerves. (2.) In long Wounds begin from the Ends, in short ones in the Middle. (3.) Let the Stitches be distant the breadth of a Finger. (4.) In deep Wounds, let the Stitches be deep; in superficial ones, the contrary. (5.) In Wounds made according to the length of the Member, stitching is not so necessary, because rolling will do the Work near as well.

Q. *What is Fasciatio, or Rolling?*

A. It is when we labour to keep the Lips of the Wound together by Slips of Linen-Cloth, cut in a *due length and breadth*, and made of Cloth only *half-worn*, and of an *indifferent fineness*.

Q. *How long is it generally before Wounds that are stitched are agglutinated?*

A. Commonly in two, three, or four Days, if they are well managed; and then the Stitches may be cut, and the Threads drawn forth.

Q. *How many kinds of Rolling are commonly in use?*

A. Four;

Of GUN-SHOT WOUNDS. 93

A. Four ; (*viz.*) *Incarnativa*, *Retentiva*, *Expulsiva*, and *Æquans* ; which are better understood by Practice, than described by Words.

Q. In what Cases are we to reject the Cure of Wounds by Agglutination, and heal them by Con-carnation ?

A. (1.) If there is loss of Substance. (2.) In great Wounds of the *Joints*, and when the *Liga-ments* and great *Tendon* of the Heel are cut in fun-der. (3.) When we look for the *Scaling of a Bone*, or the Separation of a Piece of a *Ligament* or *Ten-don*. (4.) When the *Jugular Veins* and *Soporal Arteries* are divided in Wounds of the Neck.

Q. How is Incarnation performed ?

A. It has been already taught in the Doctrine of *Ulcers*, to which you are to have recourse. •



CH A P. XXX.

Of the GUN-SHOT WOUNDS.

ARE Gun-Shot Wounds poisonous ?

A. No: For both the Shot and most of the Ingredients of the Powder are used, both in-ternally and externally, for the Cure of several Diseases, with Success.

Q. What are the Symptoms of a Gun-Shot Wound ?

A. Contusion, Pain, Inflammation, Convulsion, Heat and Change of Colour, being sometimes of a blue or Violet-Colour, sometimes the Wound is black, and the Parts adjacent livid, &c.

Q. What are the Prognosticks in these Wounds ?

A. If only a fleshy Part be wounded, and the Constitution good, it is of easy Cure ; but if the Constitution be bad, with Fracture of the Bone,

or

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or Laceration of the Nerves, Tendons, and Ligaments, the Cure is difficult, and at the best they are harder of Cure than other Wounds.

Q. *Why?*

A. (1.) By reason of the *Contusion* which always attends them. (2.) They more *slowly digest* than others, because the *natural Heat* is much abated, and the *Spirits dissipated*, by reason of the *Contusion*.

Q. *How many Intentions are there in curing these Wounds?*

A. (1.) To draw out all *extraneous Bodies*, as Bullets, Pieces of Garment, contused Flesh, Shivers of Bones, &c. And, (2.) To apply *convenient Medicines*.

Q. *What is your Method of Cure?*

A. Extraneous Bodies being extracted, if the Wound bleeds much, dress it up for the present with Restrictives and good Bandage, and at the next dressing hasten to convert the contused Flesh into *Pus*; which may be done by arming your Tents with a Liniment compos'd *ex Tereb. Ven. Mel. Myrrh. Croc. Angl. Vitel. Ovi. Ol. Catellorum*, &c. with which arm your Tents and Pledgets; and over the Wound (to ease Pain, and cherish the natural Heat, and help forward Digestion) apply a Cataplasm *ex Mic. Pan. Rad. Altheæ, Flor. Chamæmel. Melilot. Hyperic. Absinth. Farin. Hordei & Fabarum*, & adde *Ol. Ros. &c.* Then embrocate the Part with *Ol. Hyperic. & Rosar.* all round; and to the Parts above, to stop the Flux of Humours, apply a *Defensative*. Dress it twice a Day, if there be Occasion; but in that your Judgment must direct you. Keep the Body soluble by Lenitives or Glisters, and daily give some vulnerary Drink, &c. compos'd *ex Rad. Symphit. Alchimul. Salviæ, Verban. Scordii, Hyperic. Valerian. Plantag. Consolid.*

Of GUN-SHOT WOUNDS. 95.

Consolid. Agrimon. Fol. Ros. Rub. Lign. Lentisc. &c.
Or Powders and Electuaries *ex Syr. Symphit.*
Mummiâ, Bol. Ver. Macis, Sperma Ceti, &c.

Q. What must be done if a Gangreen be feared?

A. Then use *Ol. Terebinth. Gum Mastich, Sal. Armon. Virid. Æris, Camphor. and Præcipit. Rub.* also.

Q. We will suppose the Wound now well digested, how must it be mundified?

A. With *Mundificativ. ex Apio, or Paracelsi*; to which (if the Wound be foul) add a little *Un-
guent. Ægyptiac.* and if the *Sinus* be very deep, inject a Decoction, made of some of the *vulnery*
Herbs, in Wine, and add some *Mel Anglican. &c.* then incarn and cicatrize, as in other Wounds.

Q. What Cautions are to be us'd in Dressing these Wounds?

A. (1.) Use no *Escharotic Medicines*. (2.) Take care to shorten and lessen the Tents as the Wound incarns. (3.) If the Contusion be large about the Parts, they are to be scarrified. (4.) If the Parts are burned, they are to be dressed with such Medicines as profit in Burnings. (5.) Forbear restringent Medicines, because they keep in *putrid Vapours*, which may cause a *Gangreen*.

Q. But suppose the Bone be fractured?

A. Then it is to be reduced, and the Wound dressed with *Tereb. Venet. Ol. Terebinth. Hyperic. & Catellor. cum Euphorb. Tutia, &c.* which will both digest the Wound, and help to scale the Bone: but if there is a *Comminution* of the Bone, (or a *Fracture*) of the Joint; if you would not be counted ignorant nor careless in your Art, immediately amputate the Limb.

Q. How, or with what Instruments, are Bullets to be extracted?

A. If they are lodged in a Bone, the *Terebellum* is the only Instrument; but if in a fleshy Part,
the

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the Ducks-Bills, Crows-Bills, Cranes-Bills, small and long Forceps, are more proper; and the Patient must be placed as near as may be in the same Posture he was in when the Wound was inflicted, if the Bullet cannot easily be found otherwise.

Q. Suppose I find it at a contrary Part of the Body, and so cannot extract it?

A. Then, if you feel it lying superficially, cut upon it and take it out.

Q. But suppose I cannot by any Means find it, will it kill the Patient?

A. Many Men have carried leaden Bullets lodged in their Flesh for many Years, without any manifest Prejudice: however, place the Patient in the Posture he was in when he received the Wound, and try what you can do; for it is certainly best to extract it, if you can.



C H A P. XXXI.

Of WOUNDS of the Head.

Q. **W**HAT is principally to be consider'd in Wounds of the Head?

A. The most common are these; (1.) To avert the Humour from the wounded Part. (2.) The general Prognosticks. (3.) To prescribe fit Medicines to assuage Pain and Inflammation. (4.) Good Rolling.

Q. How is the Humour to be averted?

A. By Purging, Bleeding, and right ordering of the six Non-naturals.

Q. When is Phlebotomy to be administred?

A. (1.) If the Wound did not sufficiently bleed at first. (2.) If it be large, and the Patient strong.

(3.)

(3.) If an Inflammation has seized the Part, or a Fever the Patient.

Q. *In what Cases are you to purge, in Wounds of the Head?*

A. (1.) If there be *Head-Ach*, or *Lumpishness*. (2.) If there be *Tumor* or *Inflammation*. (3.) If the Body be *Cacochymical*.

Q. *What is mostly to be shunn'd in these Wounds?*

A. (1.) All *Wine*, till fourteen Days are over. (2.) If there is a *Fracture*, neither *Flesh* nor *Fish* is to be allow'd for the first seven Days. (3.) *Vener*y, above all things, during the whole Cure.

Q. *What are the Prognosticks in Wounds of the Head?*

A. (1.) No Wounds of the Head are to be slighted; for sometimes, altho' there is no *Fracture*, fearful Accidents follow. (2.) It is more hard, or easy, according to the Climate or Season of the Year. (3.) Where there is a *Pox*, or an ill Habit of Body, it is most difficult. (4.) *Contused* Wounds of the Head are more difficult than *incised* Wounds. (5.) Wounds in the Fore-part of the Head, are more dangerous than those of the Hinder-part. (6.) Wounds of the *Temples* are most dangerous. (7.) Wounds on the *Sutures* are attended with the same. (8.) If no *Fever*, *Convulsion*, *Raving*, *Palsy*, *Doating*, &c. seize the Patient, and good *Quittor* appear, and the Body be soluble, they are all good Signs, & *è contra*. (9.) *Callus* is procured in forty or fifty Days. (10.) If a *Swelling* does suddenly vanish, it is an ill Sign, unless some *Evacuation* has gone before.

Q. *Why are contused Wounds more difficult than incised ones?*

A. Because they require greater *Suppuration*.

Q. *Why are Wounds of the Fore part, of more dangerous Cure than those of the Hinder-part?*

A. (1.)

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A. (1.) Because *more Brain* is contain'd in this Part. (2.) The containing Parts are thinner. (3.) Because *more noxious Humours* may be gathered there, by reason of the multitude of *Cells*.

Q. Why are Wounds of the Temples so very dangerous?

A. (1.) Because the continual Motion of the lower Jaw doth hinder Union. (2.) Because the Branches of the *Jugular Veins* and *Soporal Arteries* are distributed there. (3.) Because of the temporal Muscle, on which the Motion of the lower Jaw depends, and which, being cut *thwart*, draws the Face *awry*, and impedes the Motion of the lower Jaw.

Q. Why are Wounds on the Sutures dangerous?

A. (1.) Because the Scull is there parted, and so Matter may fall down and hurt the Brain. (2.) Because of the *Ligaments* which pass through, from the *Meninges* to the *Pericranium*.

Q. How is the Head to be rolled?

A. It is impossible to express it *so intelligibly*, as that a Stranger should by the Directions exactly perform it; let it be done *equally*, and with many *Circumvolutions*, according as the Case requires; the Rollers ought to be made of soft Linen, half worn, of about three Inches broad, or less; and as long as is needful: which Time and Experience will make familiar, and easy to you.





C H A P. XXXII.

*Of Wounds of the Parts placed above the
Scull.*

Q. IF a Contusion of the hairy Scalp, without a Wound, present itself, how ought it to be treated?

A. (1.) Immediately bleed. (2.) Use repelling Medicines, which see in the Doctrine of Tumors.

Q. But after the Pain is gone, a Tumor should remain?

A. Then use *Discutients*.

Q. But if notwithstanding all you can do, the Tumor does not vanish, what must be done?

A. Make Incision, and if the Cranium be not foul, conclude the Cure by moderate Compression, and drying and mundifying Medicines, such as *Syr. à Ros. Sic. de Absinth. Terebinth. Aloes, Myrrh. &c.* And if the Scull be foul, first smooth the Bone with a *Raspatory*, and endeavour to procure a thin Scale, by Application of *Pulv. Myrrh. Gentian. Aristol. Rot. Sarcocol. Mastich. &c.* then incarn and cicatrize, as has been taught in other Cases.

Q. How is a transverse Wound of the temporal Muscle to be dressed?

A. Bring the Lips close together, by stitching the Skin; then dress the Wound with *Liniment. Arcaei* warm, and apply over all *Empl. Paracels.* a little malaxed with *Ol. Hyperic. cum Gum.* or some vulnerary Balsam, &c.

Q. But I will suppose the temporal Muscle wounded according to its Length?

A. First

100 *Of WOUNDS of the Head in general.*

A. First stop the Bleeding, and stitch the Lips of the Wound, and dress, as I said but now; then lay his Head inclining on a Pillow.

Q. But how will you stop the Bleeding?

A. If it will not be restrained by ordinary Means, then pass a Needle through the *musculus Flesh* into the Wound, and from thence to the outward Part, compassing the *great Vessels* with a double Thread; between which, and the Vessels, put a little *Dorsel* of Lint, to prevent cutting asunder the Parts, and to avoid Pain; then make *Ligation*, and dress him up.

Q. Suppose the Wound in any other Part above the Scull?

A. Then it is to be cured either by *Agglutination* or *Incarnation*?

Q. How by Agglutination?

A. First stitch it up uniform, then apply a Pledget dipt in *Albumin. Ovi*; the next Day dress with *Liniment. Arcæi* warm; and if it yield much Matter, dress it twice a Day, till it is well; which is commonly in four or six Days.

Q. How by Incarnation?

A. If the Bone is bare; apply the *Cephalick Powder* last mentioned, and over that dry Lint; then fill the Wound with Pledgets dipt in *Liniment. Arcæi* warm, and so conclude the Cure: but the way of Stitching is far better.

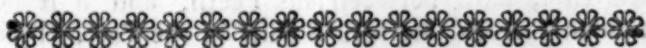
Q. How are Humours to be averted from a wounded Head?

A. To prevent Pain and Inflammation, apply a Cataplasme, *ex Farin. Hord.* boiled in *Posca*, or *Vin. Rub.* & *Ol. Rosar.* or one made *ex Medull. Panis, Lac. Recent. Unguent. Popul. Pulv. Croci, &c.* which (the Head being shaved, and the Wound artificially dress'd) is to be apply'd over all.

Q. Suppose a Contusion join'd to a Wound?

A. First

A. First wash the Wound with *Tinct. Myrrh.* or *Spir. Vini*; and if no loss of Substance, nor the Contusion very great, stitch it, and dress with *Liniment. Arcaei*; (and if it be deep, keep a Tent in the depending Part, until it yields *laudable Matter*, and then take it out) and apply an *Emplaster*, or *Cataplasm* all over.



C H A P. XXXIII.

Of a Fracture of the Skull.

Q. **W**HAT are the Signs of a Fracture in Cranio?

A. They are either, (1.) apparent to *Sense*, or (2.) found out by a *reasonable Conjecture*. Those of the first sort are manifest to the Eye, or found out by the Finger or Probe; those of the second sort, are a Singing of the Ears, Swooning, Slumbering, Giddiness, an issuing of Blood from the Nose, Ears, and Mouth, Vomiting, Raving; the Patient often puts his Hand to the Part; there is sometimes Convulsions, Palsy of one Side, Faltering of Speech, Memory impaired, Dulness of Judgment, &c.

Q. Do those Symptoms always attend these sort of Fractures?

A. No; for I have known a Patient with a Fracture thro' both the Tables, with the Bone press'd in upon the *Dura Mater*, (without wounding it) that had none of these Symptoms, except bleeding at the Ears: And another that had both a Fracture and large Fissure, that had no Symptoms of either, except Convulsions for a few Hours only.

Q. But

Q. But suppose none of these Symptoms offer, and yet you suspect a Fracture; by what other Method will you satisfy your self?

A. If the Hair be cut in sunder, and stick up in the Wound, or if the Patient upon violently *chewing* of Paper on both Sides of his Jaws, feels a *Crushing*; or if he holds a Thread with a Knot at the End, hard between his Teeth, and if it be suddenly *jerked*, he feels a Pain in the Part, there is then room for Suspicion. Tho' I had once a Patient, who had *all* the Symptoms of such a Fracture, *at first*; and *some* of them (at times) for six Weeks together; yet having no Wound, nor Tumor, whereby to guide me so as to make Incision, like an Artist; by Cephalicks, Phlebotomy, Glisters, Vescatories, Cupping, and proper Topicks, the Patient recovered, and remains still well, for ought I know: But I never heard of the like; and instance this, to caution you not to be too hasty in making *Incision*, lest you do it, and find neither Fracture, Fissure, nor Depression; and so be justly condemn'd, for Rashness and want of Judgment.

Q. What are your Prognosticks in these Fractures?

A. (1.) Pronounce not all Danger past, till an hundred Days be over. (2.) Every Fracture in the Scull is dangerous. (3.) If a Fever follows, if the Brims of the Wound grow flat at second Dressing, and do not swell, there is danger. (4.) If the Wound grows dry, or is black, the Tongue falters, Memory fails, the Eyes grow dim, a weak Pulse, and Palsy or Convulsion, Death is at hand; but if none of these Signs, then hope the best. (5.) Wounds with a Fracture of the *Sinciput*, or Fore-part of the Head, are more dangerous than those of the *Occiput*, or Hinder-part. (6.) Fractures in the *Temple Bones* are most dangerous:

Of the Section of the hairy Scalp, &c. 103
dangerous : And (7.) so are those on the *Sutures*.

Q. Why are Fractures on the Sinciput worse than those of the Occiput ?

A. (1.) Because these are more thin than the other. (2.) Because more Brain is there contain'd. (3.) Because in the Fore-part, there are several *Vaultings*, by which the Brain may be easily wounded. (4.) Because of the thinness of the Skin in the Fore-part : And (5.) because there are many and large Veins, which may cause a large Hemorrhage.

Q. Why are Fractures in the Temple-Bones so dangerous ?

A. (1.) Because these Bones are thin and weak. (2.) Because there are Veins, Arteries, and Nerves. (3.) Because the *Pericranium* doth clip the temporal Muscle, and the Muscle hath in the middle a Tendon of very great Sense.

Q. Why are Fractures on the Sutures dangerous ?

A. The Reason is already given, where we discoursed of Wounds of the Parts above the Skull.



C H A P. XXXIV.

Of the Section of the hairy Scalp, and opening the Skull.

Q. *IN what Parts of the Head may Section be safely made ?*

A. In all Parts, except the *Sutures*, and on the *temporal Muscles* ; not on the *Sutures*, because of the exquisite Sense of those Filaments which tie the *Meninges* to the *Pericranium*, and pass thro' the *Sutures* ; and not on the *temporal Muscles*, for Reasons already given.

Q. Of

104 *Of the Section of the hairy Scalp, &c.*

A. It is generally done in the Form of a *St. Andrew's Cross* ; but it is to be observed, that you be sure to make no *transverse Incision* a little above the Eye-lid, lest the *frontal Muscle* being *transversely* divided, an incurable Palsy of the Eye-lid does ensue ; wherefore in those Places the Incision is to be made, either *streight*, or *oblique*, but not *transverse*.

Q. When Incision is made, what is to be done next

A. Begin from the Points of the Incision, and separate the *Pericranium* from the *Cranium*, either with your Nails or *Spatula*, so far as that you can see the whole Fracture plainly ; then to the Bone apply dry Lint, and fill up the Incision with Dorsels, arm'd with a *Restrictive*, to stay the bleeding, and keep the Lips asunder ; and over all a Broucher : then roll it up, and open it not, till twenty-four Hours are past, if you can help it.

Q. Why is the Scull to be opened ?

A. (1.) That Pieces of the Weapon may be removed. (2.) That Pieces of the Scull, which are separated from the whole, may be taken out. (3.) That the depressed Piece, which is thrust down upon, and offends the *Meninges*, may be taken away, or reduced to its Place. (4.) For removal of *Quittor* and coagulated Blood.

Q. How much of the Bone is to be taken away ?

A. Either all the fractur'd Bone, or part of it.

Q. In what Cases is all the fractur'd Bone to be taken away ?

A. (1.) If it be on the Crown, where no depending Vent can be given for discharge of Matter. (2.) All the *shivered Bones* are to be taken out in any place. (3.) So much is to be taken away, as covering the *Dura Mater*, becomes black.

Q. What is to be consider'd, when only part of the Bone is to be removed ?

A. That

Of the Section of the hairy Scalp, &c. 105

A. That it be done on a depending Part, and that the *Trafine*, or *Trepan*, take in Part of the sound, and part of the fractur'd Bone.

Q. Is there no Exception against this Rule, in opening it in a depending Part?

A. Yes; for if the Brain appear, the *Dura* and *Pia Mater* being wounded, it must be shunn'd; because the *Brain* being fluid, would be apt to fall down to the depending Part.

Q. What are the chief Instruments with which you open the Scull?

A. They are *Raspatories*, *Levatories*, *Gimblets* called *Terebella*, and the *Trepan*, or *Trafine*.

Q. What is to be observed in the use of *Raspatories*?

A. Set the Patient in a good Light, stop his Ears, and hold his Head steady, and cover the Brims of the Wound with Pieces of Linen Cloth; then first begin with the broadest, then the less broad, and last of all the narrowest, being often moistened with Oil, or Vinegar and Water, if Blood appear; then dress it up as you do after the *Trepan*, of which we shall discourse by and by.

Q. In what Cases are *Raspatories* to be used?

A. In Fissures, or Chinks, and in a *Sedes*, when the Print of the Weapon is narrow.

Q. What is the *Gimblet* or *Terebellum*, and its use?

A. It is such an Instrument as Coopers use to raise up the Heads of Casks; its Point is made to screw; its use is to arise up a depressed Piece of Scull, by first making a small Hole with the Pin of the *Trepan*, and then screwing in this Instrument, and raising up the Bone.

Q. What is the Use of the *Levator*?

A. To raise up a depress'd Bone, after trafining.

Q. In what Parts must the *Trafine* not be applied?

A. Not

106 *Of the Section of the hairy Scalp, &c.*

A. Not wholly upon the *Fracture*, nor on a *Suture*, nor to the Places a little above the *Eye-brows*, nor to the *Temples*, nor to the lower part of the *Scull*, (if the *Meninges* be wounded) nor lastly, to the *Sinciput* of Children not above seven Years old.

Q. What is to be observed in applying this Instrument?

A. (1.) Take out the Pin when you are come to the *second Table*. (2.) Take it often out, and moisten it with Oil. (3.) Take care to cut all Parts equally, so as that you may not be through on one side, when you are not half through on the other. (4.) When it begins to shake, take it out with the *Levator*. (5.) If any Roughness remain, smooth it.

Q. How is it then to be ordered?

A. First apply a Piece of Taffaty or Sarfnet, (with a Piece of fine Silk fasten'd to it, lest it slip between the *Cranium* and *Dura Mater*, and so you lose it) on the *Dura Mater*, dipt in *Mel. Rosar.* and *Ol. Rosar.* or *Mel. Ros. & Spir. Vini*, or *Ol. Ros. & Resin.*; to the Bone dry Lint, and to the Lips a *Digestive*; then roll the Head up, and lay the Patient in a quiet Place to rest, free from Noise.

Q. In how long time will the Bone scale?

A. Some say in forty, others in fifty Days; but indeed, no certain time can be set for it.

Q. Suppose a Depression of the Scull, without a Wound, in a Child, without any ill Symptom?

A. If the Blood fluctuate up and down under the Skin, then apply to the Part a soft double Linen-Cloth, moisten'd in *Ol. Rosar. Alb. Ovi & Aceto*; which keep on twenty four Hours, but first remember to shave away the Hair: and after this, until the eleventh Day, apply a Cataplasim, *ex Fol. Ros. Rub. Bacc. Myrt. Farin. Hord. & Fabar. Fol. Absinth. Sem. Cymini, &c. & coq. in Vin. Rub. & adde*

Of the Cure of Fractures of the Scull. 107

adde Ol. Ros. & Mel. Anglican. Apply this twice a Day warm ; and from the eleventh to the twentieth Day, only apply *Diapalma* softened with *Ol. Lilior.*

Q. But if a Fracture in Cranio happen to a Child with ill Symptoms ?

A. Then it is necessary that the Scull be opened ; which being done, they are to be treated as Men are, only more tenderly.



C H A P XXXV.

Of the Cure of Fractures of the Scull appearing in the wounded Part.

Q. WHAT is a Simple Fracture of the Scull ?

A. It is when there is no Wound, and when the Fracture is of *one only* kind.

Q. How many Sorts of these Simple Fractures are there ?

A. Three ; viz. (1.) *Rima*, or *Fissura*, a Chink, or Cleft. (2.) *Contusio*, a Contusion of the Scull. (3.) *Sedes*, when the Print of the wounding Instrument is left in the Scull.

Q. Does a Fissure always pass through both Tables of the Scull ?

A. No : sometimes only through the first ; and then it is to be so far dilated, to give a Discharge to the *contused Blood* ; but if through both Tables, the Dilation is to be accordingly.

Q. But if you distrust that there is a Fissure, yet if it is so small that you cannot see it ; how will you find it out ?

A. If upon the Patient's holding his Breath, and stretching out his Breast, a thin Humour, or
F
bloody

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bloody Sanies, do issue out, it is a certain Sign; or if you apply *Ink* to the Part *most suspicious*, made thin with Vinegar to make it penetrate, and the next Dressing dry the Scull with a Sponge, and if you see any Print of the Ink to remain in the Scull, you may judge a *Fissure* to be there.

Q. *Are Fissures to have a Trepan apply'd upon them?*

A. No; unless it has been some time received, and bad Symptoms attend it; but otherwise it is to be dilated with *Raspatories*, and cured as when the *Trafine* is applied.

Q. *How is a Sedes to be cured?*

A. If it pass through *both Tables*, and no Splinters of Bone prick the *Meninges*, and the Weapon has made sufficient way for the Discharge of *Matter*, no further *Apertion* is to be made, but it is to be dressed as when the *Trepan* is applied; but if any Splinters of the Bone do offend, or the *Apertion* is too narrow, a further Opening must be made; and if it only pass through the first Table, the Bone is to be *smoothed* by *Raspatories*, and dressed with *Liniment. Arcaei*; and it often falls out, where the Patient is of a good Constitution, that the Bone does not *sear* at all, especially if to the *Tinct. Myrrh.* some Drops of *Spir. C. C.* be added, and apply'd to the Bone.

Q. *How is a Contusion of the Scull to be cured?*

A. The contused Part is to be taken away with *Raspatories*, and then to be healed as in the latter Part of the Cure of a *Sedes* is directed.

Q. *What is a Compound Fracture of the Scull?*

A. When to the Solution of Unity there is joined, either *Loss of Substance*, or some part is removed from its own place.

Q. *How many sorts are there of it?*

A. Three;

Of the Cure of Fractures of the Scull. 109

A. Three; (*viz.*) *Depressio*, a Depression; *Concameratio*, a Vaulting; or *Excisio*, a part of the Scull wholly cut off.

Q. If in a *Depressio*, one part of the Bone cleave to the whole, and the other not, what must be done?

A. Apply the *Trepan* as near to the fractured part as you can, and then reduce the depressed Bone to its place; or else remove it, as you see most necessary, taking great Care not to hurt the *Meninges*.

Q. What is *Concameratio*, or *Vaulting*?

A. It is when the Scull, being pierced with a sharp-pointed Weapon, and with Violence pulled up again, it sometimes heaves up one Table, and sometimes both, and leaves a Hollowness or *Vault* underneath.

Q. How is it to be cured?

A. If it only pass thro' the first Table, smooth it, and proceed, as has been directed; but if it pass thro' both Tables, apply the *Trafine* on the most depending Part, and proceed as before directed.

Q. How is *Excisio* to be cured?

A. If the Piece cut away, cleave to the *Cutis Musculosa*, and the Wound go no deeper than the first Table, the Piece is to be separated from the Flesh, then the Bone is to be rasped, and cured as a *Sedes*: But if both Tables be cut off, and stick to the *Cutis Musculosa*, first wash the Wound with *Spir. Vin.* and reduce the Pieces to their place, and stitch the Wound exactly.

Q. What is a Dissolution of a Suture?

A. It is, when those Parts of the *Cranium*, which are united by the *Suture* gape, and are separated by some violent Blow or Fall.

Q. What is a Collision of a Suture?

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A. It is a Contusion of its Brims, (as I told you before) and of the *Ligament* which passed thro' it, from the *Meninges* to the *Pericranium*, which causeth fearful Symptoms, and which sometimes obligeth us to apply the *Trafine* on one side the *Suture*, &c.

Q. Suppose a Fracture under the Temporal Muscle?

A. If it be with a *Puncture*, or transverse Wound, it is *very dangerous*; but if it be *long-ways*, it is to be dilated by Dorsels of Sponge; and if there be a *Fissure*, by *Raspatories*: but if there be a great Fracture or Depression, then make a *triangular Incision* a little above the Fracture, shunning the *temporal Muscle*, and the *Trepan* is to be applied, and the Shivers of Bone to be taken away, and the rest reduced to their Place; then dress as before directed.

Q. But how must the Sanies be expell'd out of the Wound?

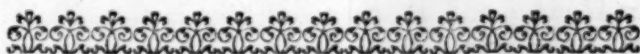
A. At every Dressing cause the Patient to bend down his Head, and to stop his Mouth and Nose, and breathe strongly, to expel it from the Wound; then inject some *mundifying Decoction*, to wash out all Filth, and dress up *secundum artem*.

Q. I have heard it confidently reported, and by some Men affirm'd vehemently, that have had Fractures in *Cranio*, that the Surgeon who cured them, put in a Piece of Gold, where the Bone came out, and healed the Wound over it: Pray how can this be?

A. The Patient that believed so, was a Fool; and that Surgeon that pretended to do so, was a Knave; and put the Piece of Gold in his Pocket, and not in the Patient's Scull: The thing is impossible, and more fit for the Creed of an old Woman, than a Surgeon. Not but I believe such a thing has been often pretended; and most Country

Of a CONTRA-FISSURA. III

try People really think so ; but it is all a Trick, and Piece of Deceit, unbecoming an honest Surgeon : the Wound not being capable of healing with any extraneous Body in it ; for if it was, nothing seems so fit, as the Piece of Scull that was taken out by the Trafine ; but it is all a *Bite*.



CHAP. XXXVI.

Of a CONTRA-FISSURA.

Q. *WHAT is a Contra-Fissura ?*

A. It is when the *Cranium* is stricken upon *one Part*, and fractur'd in *another* ; and this either in the self-same Bone, or in divers Bones, as when the right *Bregma* is struck, and the left by the same Blow is *cleft* ; and sometimes when the Blow is upon the *upper Table* that remains whole, and the *lower Table* is *fissured*.

Q. What is the Reason of this ?

A. This happens to those whose *Sutures* are very obscure and close, in whom, when the Air which is within the Scull, is strongly moved by a Blow, and on every side is driven by the Force of it, it is entirely carried through the Substance of the Brain to the opposite Part, which when it meets with the Scull, which by reason of its firmness cannot yield, gives way to a Fracture ; as a Glass, which sometimes being knocked on one side, is crack'd on the other by the same Blow.

Q. How is this kind of Fracture to be found out ?

A. If no *Fissure* appear in the Wound, and yet there are the Symptoms of a Fracture, then you have reason to take a View of the opposite Part ; or if you find a Tumor in the opposite Part, or

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that the Patient often puts his Hand to it, you may suspect a Fracture or Fissure there: But if no Tumor appears to guide you, shave the Head, and apply to the opposite Part this Emplaister, *R Pic. Naval. & Cer. ana ʒiij. Terebinth. ʒj. Mastich. & Irid. pulv. ana ʒij. f. Empl.* Spread it upon Leather and apply it, and let it lie twenty-four Hours; and if when you take it away, any part of the Skin appears *more moist* than the rest, you may suspect that the Hurt is there.

Q. Suppose the second Table to be fractur'd, the first remaining whole?

A. Then the *Trepan* is to be applied, to make way for coagulated Blood.

Q. When the Contra-Fissura is found, what is to be done?

A. Dilate the Chink with *Raspatories*, and proceed as before directed.

Q. Suppose a Contusion on the Head without a Wound?

A. The Symptoms will inform you, if there be a Fracture; which if there be, you must make Incision to come at it; but if there be not, shave off the Hair, and apply a Cataplasm, *ex Far. Hord. Acet. Vin. Rub. pulv. Ros. Rub. Bacc. Myrtill. Mastic. Ol. Ros. &c.* Then open a Vein, and the next Morning give a gentle Cathartick; also drop into the Ears, and moisten the Passages of the Nose with *Ol. Amygd. Dulc.* About the seventh Day apply *Empl. de Betonica*, malaxed with *Ol. Ros.* And now, if fearful Symptoms begin to appear, let Incision be no longer delay'd.

Q. How will you judge the Dura Mater to be hurt, when you have no Wound, nor apparent Fracture?

A. When there is a Bleeding at the Ears, a Stupidity, and a pricking Pain in the Part when the Patient blows his Nose, &c.



C H A P. XXXVII.

Of Wounds in the Meninges and Brain.

Q. *HOW many Inconveniences may happen to the Dura Mater?*

A. Five; (*viz.*) A Wound, Pain, Inflammation, Apostematation, and Discolouration.

Q. *Suppose an immoderate Flux of Blood happen in a Wound there?*

A. If the Weapon has not made way enough to come to it, it must be made; and apply *Pulv. Galeni*, to restrain the Flux.

Q. *How is Pain to be assuaged here?*

A. Use no Narcotick, nor common unctuous mollifying Medicines, but apply *Ol. Rosar. & Mel. Rosar.* artificially mixed.

Q. *Do these sort of Wounds admit of Stitching?*

A. No; they are to be cured by Incarnation.

Q. *Suppose an Inflammation happen in a Wound on the Dura Mater?*

A. Bleed, and use a slender Diet, then foment with a Decoction *ex Althea, Sem. Lin. & Faenugrec. Fol. Violar. &c.* and apply *Ol. Rosar.* and if occasion be, dilate the Scull.

Q. *How is it to be known if Quittor be contained in an Apostematation there?*

A. By the extraordinary Whiteness of some part of it.

Q. *How is it to be opened?*

A. Very warily, for fear of offending the Brain; then apply *Syr. à Ros. sicc. or Mel. Rosar.*

Q. *From whence does Discolouration of that part proceed?*

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A. From the *Violence* of the *Blow* ; from *coagulated Blood* ; from the *Coldness* of the *Air* ; by *Application* of improper *Medicines*, and from *Putrefaction*.

Q. Suppose it proceeds from the *Violence* of the *Blow* ?

A. Then apply *Ol. & Mel. Rosar.* or *Ol. Ovor.* cum *Spir. Vin. & Pulv. Croc. q. s.*

Q. But what if it proceed from *coagulated Blood* ?

A. Then dress it with a *Composition ex Spir. Vin. Mel. Croc. Sarcocol. &c.* boiled to *Blackness*.

Q. Suppose bad *Applications* have been the *Cause* ?

A. Then *Medicines* of a contrary *Quality* are to be applied.

Q. How will you know if *Blackness* proceeds from *Putrefaction* ?

A. By the strong *Smell* of the *Sanies*.

Q. What is then to be used ?

A. Such as these artificially compounded and mixt, *Spir. Vin. Syr. Absinth. Mel. Ros. Ægyptiac. Sarcocol. Myrrh. Aloes, Vin. alb. &c.*

Q. What are mortal *Signs* in this *Case* ?

A. If the *Tumor* and *Putrefaction* increases, notwithstanding all that can be done ; if the *Eyes* bunch out, the *Patient* is restless and raving, you may believe that *Death* is at hand.

Q. How is *Bleeding*, and also *Wounds* to be cured in the *Pia Mater* ?

A. As those of the *Dura Mater*.

Q. How many *Griefs* may happen to the *Brain* ?

A. A *Wound*, *Apoftemation*, *Putrefaction*, *Sideration*, *Concuſſion*, *Fungus* and *Tumor*, by reason of *Flatuoſity*.

Q. What are the *Signs* of a wounded *Brain* ?

A. A *Fever*, *Vomiting* of *Choler*, *Loſs* of *Speech*, *Slumbering*, *Stupidity*, *Dimneſs* of *Sight*, *Giddineſs*, *Foaming*, *Convulſion* ; or if the *Meninges* are both divided, and a *Subſtance* like *Fat* comes out,

out, which will neither swim above the Water, nor melt with the Fire, but is thick, round, and of a marrowy Substance; it is a part of the Brain.

Q. Are such Wounds curable or not?

A. Some pretend that they have been *so happy* as to effect a Cure; and *since it has been done*, we are to do our best Endeavours, and leave the Success to God: but at the best they are very dangerous.

Q. Why?

A. (1.) By reason of the Nobleness of the Part, and the necessary Uses of the Functions of it. (2.) By reason of the Motion of the Brain. (3.) The Moistness. (4.) The Coldness. (5.) The Consent of the Nerves which spring from thence. And (6.) Because Medicines do not easily pass to the wounded Brain.

Q. How are Wounds of the Brain to be cured, if curable?

A. First foment with a Decoction *ex Hyperic. Betonic. Calamint. Chamæm. Aneth. Euphrag. &c.* and then (till the seventh Day) use *Ol. Tereb. & Ol. Ros.*

Q. Suppose it be of a livid Colour?

A. Then dress it with *Spir. Vin. Ol. Ros. & Mel. Rosar. &c.*

Q. Suppose it yields a laudable Matter?

A. Then use only *Syr. Ros. succ. cum Aq. Vitæ, or Spir. Vini.*

Q. What Symptoms remain commonly after Wounds of the Brain are cured?

A. Faltering of Speech, and Palsy of the Arms.

Q. How is a Putrefaction and Sideration to be discerned or remedied?

A. They are not to be discovered but by opening the Scull, and that most commonly when the Patient is dead.

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Q. What think you of a Concussion, or violent Commotion of the Brain?

A. It is to be dressed as a Fracture of the Scull without a Wound, open a Vein, and inject sharp Glisters; but beware of applying astringent Medicines, because they keep in the *fuliginous Vapours*. Sometimes a *Concussion* is attended with the Symptoms of a Fracture, or Fissure; and sometimes it brings Death, if not managed with the utmost Skill and Care; and sometimes even that is all too little to save Life.

Q. What will you do if a Fungus arises?

A. Apply Medicines which strongly dry, and mildly fret, as *Pulv. Sabin. Hermodact. ust. Pulv. Turpeth. &c.* But nothing so effectual and safe, as a Powder made of common brown Oker two parts, and Powder of Savine one part, mixt and strewed on; it is a *Nonsuch*, in this case. If it grow up very large above the *Cranium*, then bind it with a Ligature to procure its fall; but beware of using *Catheretical Means*.

Q. How is a Giddiness caused in Wounds of the Brain?

A. It is caused from the Circulation and Circumvolution of the Animal Spirits.

Q. How comes Dimness of the Sight and Slumbering?

A. From Diffipation of the Animal Spirits.

Q. How is Vomiting caused here?

A. The Brain being troubled, the Affection is communicated by the Nerves of the *sixth Conjugation*, which proceeding from the Brain, are dispersed through the whole Body of the Stomach, which is drawn inward, pursued and turn'd upwards, from whence those things which are contained in the Capacity of it, are rejected by vomiting; and *Choler* being most light, is first vomited up.

Q. From whence proceeds a Torpor or Stupidity?

A. From

A. From ill Vapours which assault the Brain, and dissipate the *Animal Spirits*.

Q. From whence comes Convulsion ?

A. From corrupt Vapours, which nip the beginning of the Nerves.

Q. What is to be done in such a Case ?

A. Anoint the Neck and *Spinalis Medulla* with a Composition: *ex Fol. Rut. Marub. Rorismar. Ebuli, Salviae, Paralyf. Bacc. Lauri, Flor. Cham. Melilot. Hyper. macer. in Vin. alb. Dein coq. cum Ol. Lumbricor. Terebinth. Axung. Anseris & Human. &c. ad Consumpt. Vini ; tum, Colat. & adde Tereb. Ven. Aq. Vitæ & Cera, &c.*



C H A P XXXVIII.

Of Wounds happening to the Instruments of the Senses.

Q. **W**HY are Wounds of the Eye difficult of Cure ?

A. (1.) Because of the Excellency of the Part itself. (2.) Because of its exquisite Sense. (3.) Because of the Consent it hath with the Brain. (4.) Because of the great Flux of Humours falling upon a wounded Eye. (5.) Because of the continued Motion of the Arteries.

Q. What are the Differences of Wounds of the Eye ?

A. They are either superficial, which pass not through the *Cornea* ; or deep, which do penetrate through it.

Q. What are we principally to observe in the Cure of these Wounds ?

A. (1.) That we use no oily nor fat things. (2.) That when one Eye is wounded, we roll up both.

both. (3.) That the Head lie high, bending forwards ; and the Reasons are : (1.) All oily things inflame the Eye, and cause Pain : And (2.) We roll both Eyes up, because Light, at such a time, is prejudicial to the Eye ; and if only one Eye be rolled up, and the other exposed, that which is so exposed moves, and by its Motion causes the wounded Eye to move also ; which retards the Cure.

Q. How is Pain to be assuaged in superficial Wounds of the Eye ?

A. Things of modern use are, *Aq. Sperm. Ranar. Rosar. Plantag. Portulac. Pluvial. Mucilag. Sem. Psillii, Tragacanth. Papav. Hyosciam. Decoct. Nuc. Cupress. Balaust. Lac Muliebr. Sang. Turturum & Pullorum, Columb. &c.*

Q. How are these to be applied ?

A. Unless Matter abound, it will be sufficient (the Eye being shut) to apply them above the Eye-lid ; and then to the Forehead apply *Pulp. Pomor. sub. Ciner. coct. Cass. Mucilag. Sem. Psillii, Cydonior. Far. Hordei Cribrat. Bol. Arm. &c.*

Q. Suppose the Eye-lid and the Tunica Conjunctiva both wounded ?

A. Then great Care is to be taken, that they do not grow together ; which may be done by applying *Fol. Auri* between them.

Q. How is it to be dressed if the Aqueous Humour comes out ?

A. If it all comes out, the Sight will be lost ; but if only Part, not so ; especially in Children : and this is cured as a superficial Wound.

Q. But, what think you if the CrySTALLINE and Vitreous Humours come out ?

A. Then the Sight is of necessity lost.

Q. How is such an Eye to be dressed ?

A. With

A. With *Lap. Tutæ, & Calaminar. Præparat. Ter. Sigillat. Sang. Dracon. Sarcocol. &c.* very finely searced.

Q. *How will you dress the Wounds of the Ear ?*

A. If it be wholly cut off, dress it throughout as other Wounds ; if it be only divided, and that but in part, the dry Stitch may serve : but if it be large, a Needle and Silk must be used, taking care to pass it through the Skin [only] and not the Ear, for fear of an *Inflammation, Pain* and *Mortification*, and then use strong *Desiccatives*; and if it reach to the *Meatus Auditorius*, you must keep the Ear stoppt with a *Sponge-Tent*, to prevent a *Fungus* and *Matter* falling in, which might corrupt the *Tympanum* or *Drum*, and cause *Deafness*.

Q. *How are Wounds of the Nose to be ordered ?*

A. If the Wound be simple, what I but now laid down concerning Wounds of the Ear, may be sufficient ; but if there be a *Fracture*, it is to be reduced, and *Quills* or *Pipes* kept in the *Nostrils*, with good *Boullsters* and *Bandage*.

Q. *How would you dress the Tongue, was it wounded ?*

A. If it is wholly cut off, it is not to be restored ; but if it be not quite cut off, although it hangs but by a fleshy Thread, you must try to stitch it, and that deep too, that it do not break cut again ; then cut off the Thread, and use *Lotions ex Aq. Plantag. Syr. Myrtil. Ros. sicc. Alum. Roch. Alb. Ovi, &c.* and let him hold *Sacch. Ros.* in his Mouth, and let his Diet be of *Jellies* and *liquid things*.





C H A P. XXXIX.

Of Wounds of the Vessels of the Throat.

Q. **W**HAT think you of the internal Jugular Vein and Soporol Arteries being wounded?

A. These commonly bring Death.

Q. *Why?*

A. (1.) Because no good Ligature can be made on these Parts to stop the Bleeding, for fear of choaking the Patient. (2.) Because they immediately deprive a Man of *Vital Spirit* by the great Flux of Blood.

Q. *How then must we attempt to stop the Bleeding?*

A. By fit Medicaments, and by Deligation.

Q. *What are your Medicaments?*

A. Either *Restrictive* or *Escharotical*: The *Restrictive* are these, *Aloes*, *Sang. Drac.* *Far. Volat.* *Hypocist.* *Mastich.* *Sarcocol.* &c. The *Escharotical* are either such as procure a *Crust*, or else the *actual Caustery*; those which procure a *Crust*, are made of some of the foregoing Powders mixed with *Calx*, *Viv.* *Calcanth.* *Arsenic.* *Sublimat.* *Auripigment*, &c. mixt with *Alb. Ovi*, and applied on Tents and Dorsels, and held hard on, continually by some *Stander-by*, and not to be removed in less than three Days; and then if the lowermost stick fast, let it alone till it digests off of its own accord, for fear of a fresh Flux of Blood.

Q. *But upon Supposition that these Methods prove fruitless, and we are forced to bind the Ends of the Vessels, how is that to be done?*

A. Raise up the Vessels from the Parts to which they adhere, with a small Hook of Silver; then
you

you are to bind them *above and below the Wound* strongly, and cut them asunder between the Deligations; then digest, incarn, &c. *S. A.* Using all the time a slender, cooling, glutinous Diet; keep the Body soluble, and rightly order the Non-naturals, &c.

Q. Suppose one of the recurrent Nerves are cut asunder?

A. Then use Balsams made *ex Ol. Hyperic. Liment. Arcæi, Bals. Tereb. Bol. Arm. Aloes, Myrrh. Mastich.* &c. which will consolidate according to your your Desire.

Q. What Accidents follow upon the recurrent Nerves being cut?

A. If but one be cut asunder, the Voice becomes hoarse; but if both be divided, the Speech is quite taken away.

Q. Why are they called recurrent Nerves?

A. Because they come down from the *sixth Pair* of Nerves, and return upwards towards the Muscles of the *Larynx*, using in the left Part, the Trunk of the *Aorta*, and on the right the *Axillary Arteries*, as Pulleys.





C H A P. XL.

Of Wounds of the Neck.

Q. **W**HAT Symptoms attend the Aspera Arteria, or Wind-pipe, being wounded?

A. (1.) The Breath comes out at the Wound. (2.) Blood comes out at the Mouth. (3.) The Speech is hindered. (4.) A Cough troubles the Patient.

Q. Are Wounds of the Wind-pipe mortal?

A. Tho' they are not so of themselves, yet by Accident they may become so.

Q. Why?

A. (1.) By reason of their fearful Symptoms, being so near the Jugular Veins, and Soporai Arteries, which are generally wounded with it; it hath also many Branches of the recurrent Nerves, and sundry Muscles. (2.) Because Medicines cannot be kept on. (3.) Blood may fall from the Jugular Veins upon the Lungs, and suffocate the Patient.

Q. How are they to be cured?

A. If they be transverse, the wounded Patient must bend down his Head; but if straight, he is to hold up his Head, that the Brims may be blought close together; then treat it with Needles or Pins, as in a Hair-Lip, because Silk or Thread will rot; then apply Liniment. Arcaei, and over all Diapalma malaxed cum Ol. Myrtil. &c. and take care that neither Blood nor Quittor fall upon the Wind-pipe, lest it choak the Patient: and if it be already lodged there, vent must be given to it in the depending Part, and a small Silver Pipe put in, and there kept till the fearful Symptoms are all over.

Q. Are

Q. Are no internal Means to be used?

A. Yes; make *Gargarisms ex Hord. perlat. Flor. Ros. Rub. Balauft. Fugub. Uvar. Pass. Glycyrrhiz. Syr. Myrtin. &c.* tho' I cannot see, that they can be of much use.

Q. What are the Signs of the Oesophagus or Gullet being wounded?

A. (1.) The Meat and Drink will come out at the Wound. (2.) There will be difficulty of Swallowing. (3.) Hiccough and Vomiting. (4.) Fainting and cold Sweats, with Coldness of the Hands and Feet.

Q. What are the Prognosticks in these Wounds.

A. (1.) All these Wounds are of difficult Cure.
1. Because they bring Difficulty of Breathing.
2. Because they can hardly be inflicted unless the *Aspera Arteria, Jugular Veins, Sopor al Arteries,* and *recurrent Nerves*, or some of them, be wounded also. (2.) The smaller the Wound, and the further from the Mouth of the Stomach, the less dangerous, & *è contra*. (3.) If it be wholly divided, the Cure is impossible, because one part flies upwards, and the other contracts downwards.

Q. How are these Wounds to be cured?

A. The first Intention is Stitching, taking care to leave an Orifice in the depending Part, for discharge of Matter, &c. then cure it as Wounds of the Windpipe.

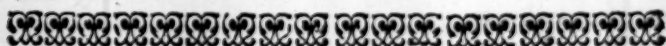
Q. What Diet is to be used?

A. All his Food must be liquid, and such as will nourish very much, (*viz.*) New Milk, Almond Milk, with *Sacch. Rosat.* dissolved in it; Chicken-Broths, Emulsions, &c.

Q. But suppose the Patient cannot swallow at all?

A. Then nourishing Glisters are to be administered; but first give a purging one, to drive the Excrements out of the Guts; and remember that

in the nourishing Glifters, you give no Oil, Salt, nor Sugar, because thereby too speedy Expulfion will be caufed.



C H A P XLI.

Of Wounds of the Breast.

Q. *W H A T* are the Signs of the Lungs being wounded ?

A. The Blood which comes forth is yellowish and frothy, there is a Cough, and difficulty of Breathing, with a Pain on that fide, tho' the Patient is moft at eafe when he lies on it.

Q. *What are the Prognosticks ?*

A. If the *Vena Arteriofa* be wounded, they are deadly ; and if the Party live, in Wounds of the Lungs, they commonly leave a *Fiftula*.

Q. *What are the Signs of a wounded Diaphragma ?*

A. There is a Heavinefs on that Part, a Raving, Afthma, Cough, Pain, and Fever.

Q. *What are the Prognosticks ?*

A. Wounds on the fleshy Part of the *Diaphragma* are dangerous ; and if in the *Nervous Parts*, certain Death enfues : becaufe in the firft cafe we cannot come to drefs them, and they are in continual Motion ; and becaufe the Parts within the Breast are eafily inflam'd ; and in the laft cafe by reafon of Inflammation, a *Delirium*, and fometimes a Convulfion follows.

Q. *Why are Wounds of this Part fo dangerous ?*

A. (1.) Becaufe it is Membranous, and in continual Motion. (2.) It is nervous, and therefore painful. (3.) Becaufe the *Pericardium* is tied to it.

it. (4.) In Wounds of it, the Brain suffers by reason of the Nerves, which are inserted in it; the Heart, by reason of its nearness, and the *Arteriæ Phrenicæ*; the Liver by reason of its Conjunction with the *Venæ Phrenicæ*. (5.) In Wounds of it, Breathing is hindered. (6.) Because Blood issues into the Cavity of the Breast. (7.) Pain of the *Spine* reaching to the Shoulder, attended with Cough, Fever and raving, &c.

Q. Suppose the Heart to be wounded?

A. If the Substance of it be wounded, it is to be reckoned deadly.

Q. Why?

A. Because, (1.) It is the beginning of Life. (2.) It is the Laboratory of the vital Spirits. (3.) It is the Shop of the vital Blood. (4.) It is in continual Motion. (5.) It is an hot Entrail, and subject to Inflammation. (6.) Its Substance is compact and dry. (7.) Blood issues out from it into the Cavity of the Breast, which stifles the Patient.

Q. How will you know that some great Vessel in the Breast is wounded?

A. By these Signs: (1.) Difficulty of Breathing. (2.) The Fever increasing. (3.) There will be vomiting of Blood. (4.) After the Blood putrifying, the Breath will stink. (5.) A depraved Appetite, a Desire to Vomit, coveting to lie down, and often Fainting, &c.

Q. Why are Wounds of the Breast in general so dangerous?

A. (1.) Because of the great Flux of Blood, which cannot be staid, because these Wounds lie deep, and so will neither admit of Rolling nor proper Applications. (2.) Because the Coats of the Veins and Arteries are Membranous, and cannot be cured by the first Intention. (3.) Because the Discharge of Matter is both difficult and dangerous:

dangerous. (4.) Because the Blood falling into the Cavity of the Breast, presses down the Diaphragma, causes Difficulty of Breathing, and being converted to Quittor, acquires a malignant Nature, and so may cause a Convulsion, Raving, and in time, an *Empyema*, *Phthisis*, and hectick Fever, if not Death.

Q. What is the Method of Cure in penetrating Wounds of the Breast?

A. (1.) Lay the Party in his Bed, with the Orifice of his Wound downwards, and let him endeavour by Coughing, and holding his Breath, to discharge the Blood fallen into the Cavity of the Breast; which being done, dip a *Flamula* in *Alb. Ovi*, and put it into the Wound, letting the greatest Part hang without it; or instead of a *Flamula*, a silver or leaden Pipe may be used, dipt in warm *Liniment. Arcæi*, and a *Diapalma* Plaister over all, with good Boulsters and Rolling, which must be continued till the Wound discharges but a small Quantity of Matter.

Q. What is the longest time required for ordinary penetrating Wounds here?

A. About Forty Days.

Q. Is the Blood and Quittor to be discharged no way but by the Wound?

A. Yes, both by coughing it up, and by Urine.

Q. How is it carried from the Cavity of the Breast to the Mouth?

A. (1.) It is carried into the *Pleura*, then into the Substance of the Lungs; thence to the *Aspera Arteria*, and so to the Mouth.

Q. How is it sent out by Urine?

A. It passes first into the Substance of the *Pleura*, then into the *Vena sine pari*, near the *Diaphragma*, where a Branch of it passes directly to the *Emulgents*, and so to the Kidneys and Bladder.

Q. Pro-

Q. Proceed to the rest of the Cure ?

A. The Patient drest, as before directed, if there be Occasion, bleed him, and give him some *vulnerary Potion*, wherein is *Pulv. Rhab. Mummia*, *Ter. Sigillat*, &c. and after this, daily a Decoction *ex Sem. quatuor frigid Maj. Rad. Fœnicul. Petroselin. &c.* or a *Decoet. Pect. cum Syr. è quinq. Radicibus, Ros. Simpl. &c.* taking ʒvj. every four Hours; or if Matter offer it self to be purged by Expectoration, then give *Aq. Font. cum Aceto* warm; and if he coughs with difficulty, give *Syr. Tussilag. aut Glycyrrhiz. cum Syr. Acetos.*

Q. May no Injections be used ?

A. Yes, as the Case may stand; but beware, (1.) That no bitter thing be put into them; and, (2.) That care be taken, that all the Injection come out again: and then upon the *Flamula* or Pipe, lay a Sponge wet in *S. V.* for the first four or five Days, to keep out the Air, and extract the Matter by a gentle heat. (3.) Use no Pledgets of Lint, lest by Inspiration they be pulled into the Cavity of the Breast, and cause Putrefaction.

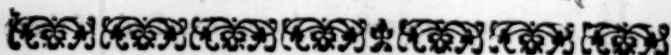
Q. How often are penetrating Wounds of the Breast to be dressed ?

A. According to the small or great Quantity of the Matter, once or twice a Day.

Q. When is it time to suffer the Wound to close ?

A. When the Patient breathes freely, finds but little Pain, and no Weight towards the Diaphragma, and the Quittor laudable, and but little in quantity.





C H A P. XLII.

*Of penetrating Wounds of the Abdomen,
without any Hurt of the Parts contained.*

Q. *HOW will you be certain if a Wound of the Abdomen penetrates, or not?*

A. If the *Omentum*, or one of the *Intestines* start out, or if you inject warm Wine, and it does not return, or if the Probe goes deep straightways, you may judge it penetrates.

Q. *What are the Presages in such a Wound?*

A. A Wound of the *Abdomen* not penetrating, is without Danger, unless it be extraordinary large. (2.) A Wound on the middle Part is more dangerous than one on the sides. (3.) All penetrating Wounds are dangerous. (4.) If any of the contained remarkable Parts are wounded, it commonly proves deadly.

Q. *Why are all penetrating Wounds there dangerous?*

A. (1.) Because they are mostly large, and always deep. (2.) Because the Air hurts the *Intestines*. And, (3.) because the *Quittor* falls into the Cavity.

Q. *How are we to proceed in the Cure?*

A. If any Part start out, it is to be restored either by your Hand; or if it has long hung out, and is tumified, it is to be done by a Fomentation *ex Flor. Cham. Melilot. Anethi, Pulegii, Tanaset. Lavendul. Absinth. Bacc. Lauri, Sem. Cymini, Anisi, &c.* decocted in *Vin. Rub. vel Lacte*: and if after reasonable Fomentation you cannot restore it, the Wound is to be enlarged, to make way for it.

Of penetrating Wounds of the Belly. 129

Q. If by reason of long continuing in the cold Air, the Omentum be cooled, hardened or livid, what must be done with it ?

A. Then tie it near to the sound Part, and cut the corrupt Part away, letting the Thread hang out, till the corrupt Part separates from the whole.

Q. Why must Ligature be made in this Case ?

A. Because otherwise much Blood would fall into the Cavity of the *Abdomen*.

Q. The Omentum being restored, how are these Wounds to be stitched ?

A. Having a clear Light, and a good Assistant to hold up the Parts, you must lay the Patient on the side opposite to the Wound, that the Guts be not in your way ; then take a good Needle fit for the Purpose, well armed with a good waxed Thread ; and then, first, the Needle is to be thrust thro' the Skin and the Muscles, even to the *Peritonæum*, not touching it on that Side ; then from within outwards the Needle is to be thrust thro' both the *Peritonæum* and Muscles of the opposite side ; then at an Inch distance, the Needle is to be passed thro' the Muscles of the same side, leaving the *Peritonæum*, and afterwards from within outwards, it is to be passed thro' the *Peritonæum* and Muscles, and so proceed, sometimes piercing the *Peritonæum*, and sometimes forbearing it, till you have sufficiently stitched the Wound, which ought to be strengthened by the *dry Stitch*, because in a few Days the Thread will cut the Brims asunder.

Q. What Topick will you then apply ?

A. All vulnerary Balsams, and agglutinative Emplaisters, are proper ; as *Bals. Lucatell. Linim. Arcaei, Ol. Hyperic. cum Gum. Ol. Tereb. Sarcocol. Mastich. &c.* mixed ; and over all, *Empl. Paracels. & ad Hern.* mixed ; and to prevent Pain, embrocate all the Parts about with *Ol. Rosar.* But
remember

remember to leave an Opening in the depending Part, for the Discharge of Matter, which otherwise would collect, and cause sad Accidents.



C H A P. XLIII.

Of Wounds of the Parts appointed for Chylification.

Q. WHAT are the Signs of the Stomach wounded?

A. The Wound is under the *Cartilago Ensiformis*, from whence *Chyle* comes forth; also there is Hiccough, vomiting of *Choler*, and whatever is taken in by the Mouth; the Pulse grows weak, thin Sweats, and the Extremities of the Body grow cold, &c.

Q. What are the Prognosticks?

A. If they are superficial, they are of easy Cure; but if they are penetrating, and towards the bottom of the Stomach, they are deadly.

Q. What do you mean by that Word deadly?

A. (1.) In a strict Sense, that which brings inevitable Death. (2.) In a more lax Sense, that which most commonly brings Death.

Q. Why are they so dangerous?

A. (1.) Because it is of a Membranous Substance. (2.) The Brims of the Wound cannot be kept together by Ligature. (3.) Vulnerary Potions slip out of it. (4.) Meat and Drink keep asunder the Brims. And, (5.) it is a very sensible Part.

Q. How are Wounds of the Stomach to be cured, if at all curable?

A. The Tent must not enter the Stomach; only it is to keep open the Parts lying above it; let it be armed with *Tereb. Ven. lot. cum Vitel. Ovi*, &c. and

and outwardly embrocate with *Ol. Rosar. & Myrtill.* and give him inwardly *Syr. Cydonior. vel Granat. in Aq. Plantag. or Vinc. per Vinc.* and let him eat and drink very sparingly.

Q. What are the Signs of the small Guts being wounded?

A. The *Chyle* comes out at the Wounds, the Flanks swell, the Patient vomits *Choler*, and has the *Hiccough*, with great Gripings in the Belly.

Q. Which are most dangerous being wounded? and why?

A. Wounds of the small ones are most dangerous; because they are more nervous, and of a more exquisite Sense, are nearer to the Stomach, and have more *Mesaraical Veins*, besides they distribute the *Chyle*, and more refine it, and their Substance is more thin, and not so readily admit of Agglutination as the great Guts do.

Q. What are the Presages in these Wounds?

A. Those of the small Guts prove most commonly mortal; and amongst these, Wounds of the *Jejunum* are the worst.

Q. How are these Wounds to be cured, if curable?

A. If the Gut be not got without the Wound, it must be gently drawn out, and stitched with the Glover's Stitch, with Thread not waxed; then foment it with warm Red Wine, and reduce it to its place, strowing over it *Pulv. Sarcocol. Myrrh. &c.* and then the external Wound is to be stitched and dressed as has been taught in the Chapter of penetrating Wounds of the *Abdomen*. Then lest the Excrements should harden, feed the Patient with moistening Meats; and as you see occasion, give him *emollient Glisters*: But here is no necessity for vulnerary Drinks.



C H A P. XLIV.

*Of Wounds of the Liver, Spleen, Kidneys,
Emulgent Vein, Artery and Bladder.*

Q. *W*HAT are the Signs of a wounded Liver?

A. A great Flux of the Blood on the right side, and the side drawn towards the Spine; the Patient delights to lie upon his Belly, the Scapula stretched, and pricking Pains even to the Neck; they have a Fever, and sometimes void Blood by Urine, &c.

Q. *What are the Prognosticks?*

A. (1.) If these Wounds are superficial, they admit of Cure; if deep, not. (2.) If cold faint Sweats seize the Patient, and he thereupon grows weak, Death is at hand.

Q. *Why are deep Wounds here mortal?*

A. (1.) There is a great Flux of Blood. (2.) Inflammation. (3.) Vulnerary Potions lose much of their Energy before they can reach the Part. (4.) It lies so deep, that Medecines cannot well be applied. (5.) Matter cannot be discharged, and so the whole Liver may be corrupted, from whence Sanguification is hindered, and a Consumption or Dropsy procured, &c.

Q. *What is to be done, if you are called to dress such a Wound?*

A. Dissolve astringent Troches in Aq. Plantag. or Bursa Pastoris cum Syr. Ros. sic. Myrtil. & Granat. &c. and give inwardly vulnerary Drinks, &c.

Q. *What are the Signs of a wounded Spleen?*

A. Black

A. Black Blood flows from the left side ; the Side and Stomach become hard ; Thirst increases, and the Pain reaches to the Neck.

Q. *What are the Presages in this Case ?*

A. Some affirm that the whole Spleen may be taken out, and the Patient live ; tho' it is certain that deep Wounds of it are for the most part deadly ; or at best, the Body becomes ill affected, so that Dropsy, Scabs, and such Diseases may seize it.

Q. *Why do Wounds of it commonly prove mortal ?*

A. (1.) Because a great Flux of both *Venal* and *Arterial* Blood doth follow. (2.) It is a part helping Sanguification, and being wounded, is obstructed in the Performance of its Duty. (3.) It is easily inflamed. (4.) Because it hath a great consent with the Heart, by Communication of the Arteries ; by which (from the Quittor and putrify'd Blood) *noisome Vapours* may be sent to the Heart.

Q. *How are these Wounds cured ?*

A. As Wounds of the Liver.

Q. *What are the Signs if the Kidneys are wounded ?*

A. If it reach to the *Pelvis*, clotted Blood will come forth by Urine ; there will be a great Pain in the Part, which will reach to the Groin and Testicles.

Q. *What are the Prognosticks ?*

A. (1.) If the Wound be received through the Back, it is mortal. (2.) If it be received by the Side, and pierce no further than the *Carunculae Papillares*, it may be cured, but with much Difficulty. (3.) If it pierce to the *Pelvis*, it is most commonly deadly.

Q. *Why do Wounds of the Kidneys, received by the Back, prove mortal ?*

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A. Because the Wound must pierce the *Pjsa*, and the Nerves springing therefrom, the *Spinalis Medulla* can hardly escape.

Q. *Why are these Wounds of difficult Cure, tho' penetrating no farther than to the Carunculæ Papillares ?*

A. Because both the Muscles of the Belly and the Peritonæum must be wounded also, between whose Membranes the Kidneys are wrapped.

Q. *Why do the Wounds prove mortal, if they reach the Pelvis ?*

A. (1.) Because the draining of the Serosity from the Veins and Arteries, is so very necessary, otherwise it would hinder the Union of the Wound. (2.) Because the Substance of it being very compact, does very difficultly admit of Consolidation.

Q. *Suppose the Emulgent Vein and Artery be wounded ?*

A. Then Death may be expected, because of the desperate Flux of Blood which will ensue ; nevertheless the Cure may be attempted by healing Injections, and giving inwardly vulnerary Potions, or *Lac recent.* in which dissolve *Sacc. Rosat. Troch. Alkekengi cum Opio*, or *sine Opio*, as your Judgment directs you.

Q. *What are the Signs of a wounded Bladder ?*

A. (1.) The Urine comes bloody and sparingly. (2.) If the Urine falls into the Cavity of the *Abdomen*, it will seem to be an *Ascites*, and the Pain will be sent to the Groins and Testicles.

Q. *What are the Prognosticks ?*

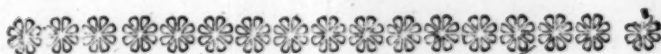
A. (1.) Wounds in the fleshy part of the Neck of the Bladder may be cured ; as may those in the sides of the Groin, if the Patient be young. (2.) Wounds in the Membranous Parts of the Bladder are incurable, because the Bladder is nervous, thin, and has but little Blood, it is apt to mortify ;
the

Of Wounds of the Nervous Parts. 135

the Acrimony of the Urine will not suffer the Wound to heal; and it is attended with dreadful Symptoms.

Q. How are these Wounds to be cured, if curable?

A. (1.) Admit of no cold Water to be drank.
(2.) Give vulnerary Potions, in which dissolve
Syr. Ros. sic. Mel. Rosar. Gum Tragacanth. &c.
and to the Wound apply *Tereb. Cypr. Ol. Oor.*
Vitel. Ovi. &c.



C H A P XLV.

Of Wounds of the Nervous Parts.

Q. *WHAT* do you intend here, when you speak
of Wounds of the Nervous Parts?

A. I mean Nerves, Tendons, and Ligaments.

Q. By what Signs will you know a Nerve to be wounded?

A. (1.) By the Part; if many and great Nerves be in the place wounded, or that pass by it. (2.) Pulsation, Raving, Convulsion, Inflammation, Mortification, &c.

Q. What are the common Accidents happening to Nerves?

A. A Puncture, an Incision, a Contusion, and Distortion.

Q. What are the Prognosticks in Wounds of the Nerves?

A. All Wounds of the Nerves are dangerous.

Q. Why?

A. (1.) Because the Membrane, with which they are covered, proceeding from the *Meninges*,

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makes them *exquisitely sensible*, and they are filled with *Animal Spirits*. (2.) Because of their consent with the Brain and the *Spinalis Medulla*. (3.) By reason of the fearful Symptoms which follow.

Q. What are the general Indications of Cure?

A. (1.) To prevent the Flux of Humours, breathe a Vein, and give gentle Catharticks. (2.) Use a very slender Diet. (3.) Let the Air be warm. (4.) Use all your Applications warm.

Q. How will you know when the Heat of the Medicine is proportioned to that of the Part?

A. (1.) If the Patient, upon the Application, feel a pleasant Heat. (2.) If the Part is possessed with a pleasant Itching; but if the Party feel either no Heat at all, or too much, upon the Application of the Medicine, it is not as it ought to be.

Q. How is a Puncture of a Nerve to be cured?

A. By Medicines hot, dry, and of subtle parts, to digest, attract, and dry the Putrefaction; (*viz.*) *Ol. Tereb. Spir. Vini. Euphorb. Ol. Rosar. cum Sal. Com. &c.*

Q. But what will you do, if Symptoms do not abate upon these Applications?

A. Then make cross Incision of the Skin, that Medicines may have their due Energy on the punctur'd Part, when perhaps it may be necessary to compound your Applications in milder forms.

Q. Which is least dangerous, a Nerve quite divided, or only cut partly through?

A. That quite divided.

Q. Why so?

A. Because then it cannot send any Harm to the Brain; but the Use of the Part is for ever lost.

Q. How are such Wounds to be cured?

A. The Topicks must be dry, and but very little biting, as *Unguent. de Calce lot. &c.* and by *Sarcoticks*,

Of Wounds of the Nervous Parts. 137

Sarcoticks, such as in our Conference have been often repeated.

Q. How must it be dressed, if but in part divided?

A. As directed already at the beginning.

Q. But if Symptoms do not abate, how then?

A. Then, (rather than to expose the Patient to the Danger of Death) it will be best, quite to divide it; then to use Anodyne, and drying Medicines, with Fomentations, Cataplasms, &c. formerly prescribed.

Q. Suppose the Nerve to be contused, or bruised?

A. If there is no Solution of Unity, embrocate with *Ol. Lumbricor. & Terebinth.* hot, and apply *Empl. Sticiz. Paracels.* malaxed with *Ol. Hyper. Comp. &c.* spread on Leather.

Q. Suppose a Distortion of the Nerve, which hinders the Motion of the Part?

A. Embrocate cum Unguent. *Nervin. & Ol. Terebinth.* and apply a *Cerat. ex Empl. à Mucilag. & Gum. Ammoniac. &c.*

Q. But what must be done, if after this, a Hardness and Numbness of the Part remains?

A. Embrocate with *Ol. ex Pedibus Bovin. Lil. alb. Adeps Anseris, & Gum. Bdellii, cum Mucilag. ex Rad. Altheæ, Sem. Lini & Fœnugrec.* warm, and over the Part apply *Empl. Diach. cum Gum.* softened with liquid Storax, &c.

Q. What must be done when an Inflammation attends a wounded Nerve?

A. Embrocate cum *Ol. Sambucin. & Acet. Rosat.* and over all apply a Cataplasm *ex Far. Hordei. Orobis, Oximel. &c.*

Q. What must be done to abate Pain?

A. Bleed, purge, use a spare Diet, and apply a Cataplasm *ex Far. Fabar. Fol. Malv. & Vio-*

*lar. coct. in Lacte. recent. cum Unguent. Popul-
on, &c.*

Q. Suppose a Convulsion seize the Part ?

*A. Embrocate the Spine and wounded Member
cum Ol. Cham. Lavendul. Succini, Rorismarin. &c.
hot, and apply to the Member the inside of a
Sheep's-Skin, newly killed.*

*Q. How will you know if a Tendon be wound-
ed ?*

*A. (1.) If the Wound be near the Joint. (2.)
If it be in a Part that is not fleshy, &c.*

Q. What are the Indications of Cure ?

A. The same as those in a wounded Nerve.

Q. How are wounded Ligaments to be cured ?

*A. By Medicines drying, and not too hot,
Ol. Mastich. Bals. Natural. and consolidating
Powders.*



C H A P. XLVI.

Of Wounds of the Joints.

Q *HOW are the Wounds of the Joints to be
cured ?*

*A. If it be a Puncture, it is to be managed as a
Puncture in a Nerve or Tendon ; but if it be by
Incision, they are to be stitched, leaving a Place
for discharge of Matter in a depending Part ; and
let all your Applications be very drying, and
applied hot, Liniment. Arcaei, Pulv. Myrrh. Sarco-
col. Mastich. Aloes, &c. and over all apply a Cata-
plasm ex Far. Hord. & Fabar. Flor. Cham. Melilot.
Acet. Sambuc. Ol. Ros. Popul. &c.*

Q. What is to be considered in these Wounds ?

A. Chiefly

A. Chiefly the due Position of a Member, that it may not be kept in such a Posture, as that the Limb may be useless when the Wound is healed.

Q. How is that ?

A. (1.) If the upper part of the Shoulder be wounded, put a large Boustier to the Arm-pit, and carry the Arm in a Scarf. (2.) If the lower part of the Arm be wounded, carry it in a Posture between *Extension* and *Contraction* ; and when the Lips unite, use a moderate Motion of the Limbs. (3.) If the Joint of the Elbow be wounded, take care that it may not be too much contracted, nor extended. (4.) If the Wrists or Joints of the Fingers be wounded, keep them half shut, moving a Ball in the Palm of the Hand ; otherwise they may prove useless when the Wound is healed.



C H A P. XLVII.

Of AMPUTATION.

Q. WHY is Amputation performed ?

A. To preserve the Life of the Patient, which otherwise would be lost.—*Immedicabile ense rescidendum est.*

Q. When is it to be done ?

A. When there is no Possibility of staying the Mortification, or saving the Life and Limb without it.

Q. In what Part is it to be made ?

A. If in the Arm or Thigh, it is to be as near the Wrist or Knee as possible ; but let it be where it will in the Leg, your way is to take it off about three or four Inches below the Knee ; for a long
Stump

Stump of the Leg is both troublesome and unseemly.

Q. How is it to be performed ?

A. Place the Patient to your mind, having sufficient Help to assist you, let one of your Assistants *draw up the Muscles very tight*; then about two or three Fingers breadth above where you design to take off the Limb, make a very hard Ligature, and a Hand's breadth above that, make another slack; which must be turned about with a short Stick, (which is called a *Batoon*, or a *Tur-niken*,) till it *numbs the Part*; then let one Assistant hold the upper Part, and another the lower Part of the Limb steady; then (standing within side of the Limb) with two Stroaks of your dismembring Knife, divide the Flesh, (and with the back of it, the *Periosteum*) and then as near to the upper Part as possible, with your Saw, take off the Bone, with as few Stroaks as you can; (remembering, that if there be two Bones, as below the Elbow and in the Leg, that you first divide between them with your *Catling*.) Then take Dorsels, being first armed with your Restrictive, and then dipt in scalding hot *Ol. Terebinth.* and apply to the Mouths of the Vessels; to the Bone a Pledget of dry Lint, and to the Stump two large Pledgets, one larger than the other, yet both so big as will cover all the Stump, armed with *Pulv. Restricting. maj.* made soft with *Alb. Ovi. & Acetum*; all which keep hard on with your Hand, till your Assistant looses the first Ligature, and shoves down the Muscles over the Stump. Then over all pull on an Ox-Bladder, and over that a cross Cloth hauled up *torte*, to keep all on firm; then with a single Roller make several Turns about the cross Cloth, rolling sometimes upwards and sometimes downwards till all be used. Then with a double-

double-headed Roller, roll all the Dressings on equally to the Stump, taking care, that it be neither too *slack* nor too *torte*; (for the first would not restrain the Hemorrhage, and the second would cause Pain, Inflammation and Mortification.) Then take off that Ligature belonging to the Batoon, or at least, slacken it; and so put your Patient into his Bed, with his Stump raised, and some one to sit by him, to apply their Hand to it, till the Dressings dry on.

Q. Suppose you amputate for a Mortification.

A. If possible, take it off two Fingers breadth above the Mortification; or if it so happens that you cannot, then after the Limb is off, you must apply to the Stump actual Cauteries, to dry up the Humidity, and recall the Spirits to the Parts; and then dress it up *S. A.*

Q. Is there no other way to stop Bleeding but Ol. Terebinth. and the actual Cautery?

A. Yes; Many make Ligature on the Ends of the Vessels; and if you amputate where there are great Vessels, it will be convenient, instead of Dorfels, to have Buttons made of Tow, armed with a Restrictive, and dipt in hot *Ol. Tereb.* and so apply them, and dress up the Stump as before directed, having first made the *cross Stitch*, which will help to stop the Flux of Blood, and make a round handsome Stump also: And indeed, the *cross Stitch* is a more quick way than to take up the Arteries, and full as secure: For in all the Sea-Fights which I have been in, (which have been pretty many) I never used any other Method, and never had any Hemorrhage attending, nor succeeding it: not but taking up the Vessels and tying of them, is a very sure and secure Way, if you have Time; but in a Sea-Fight, attended with great Confusion and a Multitude of Business, and
where

where you must operate by Candle-light ; a Ligature of the Vessels is not so practicable nor eligible, and takes up too much Time ; therefore, if the cross Stitch be made directly over the Buttons (that are on the Ends of the Arteries) and pulled tight and equal, and the Stump also covered with small Pledgets armed with Restringtons, and two large ones over all, no Hemorrhage need to be feared, though no Ligature of the Arteries be made at all.

Q. When is it to be opened again ?

A. Not till the third or fourth Day ; but in the *Interim*, you are to see that it does not bleed, and ease the Bandage, if there be occasion.

Q. How is it to be dressed the first Dressing.

A. Have in readiness some warm Water and a Sponge, to soften the Dressings, that they may be taken off, without causing a new Flux ; which done, wipe it clean, and apply a dry Pledget to the Bone ; and to the Stump, Pledgets armed either with *Basilicon*, or a Digestive *ex Tereb. Ven. Vitel. Ovi, Far. Tritic. Ol. Catellor. or Lumbricor. & Croc.* then with a Pledget of dry Tow over all, with a cross Cloth and double-headed Roller, lay him by for that time.

Q. And how then ?

A. The next Day have in a readiness a good Fomentation, in which let Stupes be wrung out scalding hot, and so applied for half an Hour together ; then dress it up as you did the Day before, and so continue till the Wound is well digested ; every Day dipping the Pledgets in *Spir. Vini* warm ; and then cure it as other Wounds of the fleshy Parts, taking care to prevent a Fever, or ill Accidents.



C H A P. XLVIII.

Of a Gangrena or Mortification.

Q. **W**HAT is a Mortification ?

A. It is when the natural Heat of a Limb is *in part* extinguished ; the Limb is discoloured, cold, and *in part* insensible.

Q. What is a Sphacelus ?

A. It is when the natural Heat is *wholly* extinct, the Limb is *dead, livid, vesicated, quite insensible, and foetid.*

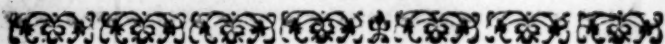
Q. What is to be done in this Case ?

A. Amputation without delay.

Q. But suppose it is only a Mortification ?

A. Then scarrify the Part till it bleeds, and the Patient feels it ; then apply scalding hot Stupes for half an Hour, wrung out of a strong Fomentation, wherein is put a Quantity of *S. V.* or Brandy ; and to the Scarrifications apply either *Ol. Terebinth.* scalding hot, or *Spir. Vin. & Ægyptiac.* and dress it twice a Day, till the Mortification stops, the Sloughs separate, and the Scarrifications digest ; then mundify, incarn and cicatrize, as in other Cases.





C H A P. XLIX.

Of Fractures in general and particular.

Q. *W* H A T is a Fracture ?

A. It is a *Solution of Unity* in a Bone; arising from some violent external Cause; it is called in Greek *Κατάγμα*.

Q. *How is a Fracture made ?*

A. Three ways; viz. (1.) *Transverse*, as when a Stick is broke short off. (2.) *Streight*, when the Bone is split up and down like a Plank. (3.) *Oblique*, when it is compounded of both the former.

Q. *How will you know when a Bone is fractur'd ?*

A. (1.) By the crackling of the Bones as you handle the Part. (2.) By the violent Pain in the Part, if it be handled. (3.) Commonly there is a Prominence or bunching out. (4.) The Limb is without Strength, and uselefs, and sometimes there is a Shortness in it; but these are Signs attending the *Transverse* and *Oblique* Fracture only.

Q. *How will you know when it is split lengthways ?*

A. The Part is *thicker* than naturally it should be, with Pain and Unevenness, &c.

Q. *How many sorts of Fractures are there ?*

A. Two; (viz.) *Simple* and *Compound*; the one is without a Wound, and the other ever attended with one.

Q. *Which are attended with most danger ?*

A. The *Compound* ones without dispute, and those again in the great Bones, and near the Joints.

Q. *How*

Q. How many Intentions of Cure are there in a Simple Fracture ?

A. Five ; viz. (1.) To put the fractur'd Bones exactly together again ; which is done by Extension and Réduction. (2.) To keep the Parts so put together in their right places. (3.) To manage the Cure as it ought. (4.) To endeavour to breed a Callus. (5.) To correct ill Accidents.

Q. What Damage comes by not making right Extension ?

A. If it be more violent than it should, it causes Fevers, Pain and Convulsions, and sometimes Palsies ; and if it be less than it should, the Shivers of Bone will rub one against another, and break, and so by their pricking on the *Nervous Parts* cause Pain ; but the bigger the Bone, the more violent Extension out to be.

Q. How is the Operation to be performed ?

A. Either by the Surgeon's Hand alone, (as in young Children) or by Pulleys, as in very strong Bodies, or where the Fracture has remained long unreduced ; or by two Assistants, the one holding the upper, and the other the lower Part of the Limb, and so making due Extension, till the Surgeon with his Hands gently and exactly reduces the fractur'd Bones.

Q. How will you know when the Bone is well reduced ?

A. If compared with the sound Limb, it be found to be uniform with it : or if no Hollowness nor Inequality remain in the Part, and if Pain be abated, these are all good and certain Signs.

Q. How are the Parts of the broken Bone to be kept united ?

A. Having reduced the Fracture, apply all round it, either *Empl. à Bolo*, or *Bol. ver. & Posca*, made into the form of a Liniment, and spread upon

a soft Cloth; which simple Composition alone is of more Effect to ease Pain, prevent Inflammation and a Flux of Humours to the Part, than any Medicine whatsoever that I ever yet met with, however pompous the Title may be. Then with a Linen Roller dipt in *Posca*, take three or four Turns round the Fracture, and from thence roll upwards as far as you see convenient, and so downwards again to the Fracture; then to that part of the Fracture which bunched out, apply a Boulster dipt in *Posca*, and then with a double-headed Roller take a Turn or two about the Fracture, and so pass one part upwards and the other downwards, till you have spent it all; and then round the Limb, (with three Pieces of Tape) tye (pretty hard on) as many Splints of good Past-board, armed at the Ends, as will compass the Part: and then bleed the Patient, and lay him in his Bed, as easy as you can, and his Leg in a Case, made for that Purpose, to keep it firm, and every thing hollow from it; keep his Body soluble, and him to a spare Diet.

Q. How will you know if the Bandage be good?

A. (1.) By the Patient's Ease. (2.) If the next Day, a loose small Tumor appear in the extreme Part, the Bandage is good; and on the contrary, if no Swelling appear, or a great and hard one, it is bad: for the first shews that the Fracture is not kept so hard rolled as it ought, and the latter causes Inflammation.

Q. When are Dressings to be taken off?

A. Not till the seventh Day, except you see absolute Necessity.

Q. How is it then to be managed?

A. If you find all things well, embrocate with *Ol. Rosar.* and apply a Cerecloth, *ex Empl. Diapal. ad Herniam & Paracels.* and roll it up as at first; only

only first remember, that if it is possessed with a troublesome Itching, let it be bathed in warm Water; by which Method, the *Tone* of the Part will be preserved, and the Substance of the Bone kept sound, if rightly followed.

Q. When do you endeavour to breed Callus?

A. About the seventh Day.

Q. Of what is Callus bred?

A. Of the Nourishment of the Bone, ouzing out of the Edges of the Fracture, which grows hard about the fractur'd Ends; and though is not Bone, yet it is so hard, that it will sooner break in any other part, than where the *Callus* is bred.

Q. What are the Indications heret?

A. (1.) To supply fit Matter. (2.) To keep it from being washed away from the Edges of the Fracture.

Q. How is it fit Matter to be supplied?

A. The Food must be thick and viscid. Rice, Wheat, Feet and Heads of Calves and Sheep, and Neats; and that by degrees in a larger Latitude. Some give inwardly *Osteocolla*; let your Applications be *implastick*, and your Bandage not too hard.

Q. How will you know when Bandage is less or greater than it should be?

A. If it is less than it should be, if you touch the Part, little or no *Callus* is felt, and the Part is weak in Motion, & *è contra*.

Q. How is want of Callus to be remedied?

A. Greater Liberty in Diet must be allowed, the *Astringents* must be more gentle, the Bandage must be slacken'd, and the Part must be bathed with warm Water, till it looks red and swell; and if there is too much *Callus*, the contrary Course is to be taken.

Q. Suppose

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Q. Suppose that by over-streight Rolling, &c. the Limb grows small?

A. The Patient must be nourished, and Plaisters of Pitch applied, and hastily pulled off again several times one after another, that the pulling off the Hair may cause Pain, and so attract Nourishment to the Part; and then pour warm Water upon it, &c.

Q. Suppose that after the Fracture is cured, the Limb is not in its right Figure?

A. If the Limb be not hurt in its Motion, or if the *Callus* be old, and the Patient weak, and old too, he must be satisfied without striving any further; but if he be young and strong, and the *Callus* new, the only way is to break the Fracture again.

Q. How is that to be done?

A. For several Days bathe the Part with a Decoction of *Althea*, *Malva*, &c. boiled in Neats-Foot Broth, and apply *Empl. à Cicuta*, cum *Axung. Porcin.* and then with Strength of Hand break the Bone again, (laying it upon some hollow place) then reduce it as it ought, and cure it as other Fractures.

Q. Tell me how particular Fractures are to be reduced?

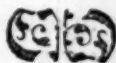
A. The Operation is so alike in all Fractures, that it is almost needless to mention Particulars; however, take these few Instructions. If the *Clavicle* or Collar Bone be broke, let an Assistant stand behind the Patient, and take hold of both his Shoulders, and pull them back, whilst he presses with his Knee between the two *Scapula's* forwards, and then you may easily reduce it with your Hands. If a *Rib* be broke, the Patient must be laid thwart a Cask, or some other thin convex thing, with his well Side downwards. And if the *Os Femoris*

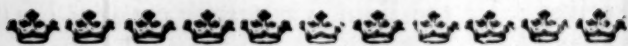
or

or Thigh-bone be broke, take care you are not deceived ; for the Bone is naturally crooked in all, as may be seen in every *Skeleton* ; and the Part being very fleshy, the Bone is with difficulty kept in its place.

Q. Suppose the *Patella* or *Knee-Pan* be fractur'd?

A. This seldom happens ; but if you meet with such an Accident, and it be broke *transverse*, a Lameness will attend the Patient so long as he lives ; but if the Fracture be right up and down, not so, (if it be well managed.) And the Reason is plain, for if the Fracture is transverse, the seventh, eighth, and ninth Muscles drawing upwards, and the Tendon inserted in the *Patella* drawing downwards, it is almost impossible that the *Patella* should ever be joined as it ought ; but in a Fracture there, *right up and down*, the Ends of the seventh, eighth, and ninth Muscles that move the Leg, meeting about the *Patella*, and ending in a strong Tendon, which involving the *Patella*, the Fracture is apt to close of itself, and so remain. However, if either of them happens, use all your Art to reduce it, and by Bouldsters and good Bandage to keep it in its place, and cure it as other Fractures, &c.





C H A P. L.

Of a Compound Fracture.

Q. *H*OW is a Compound Fracture to be managed, where neither the Bone is made bare, nor do we look for any Piece of Bone to come away?

A. First reduce the Fracture as is before taught. (2.) Bring the Lips of the Wound together, and stitch them. (3.) To all the Fracture apply *Astringents* and *Glutinatives*; and to the Wound, if there is no Bleeding, only a Pledget dipt in *Vin. Rub. & Ol. Rosar.* and over that the nine or fifteen tailed *Bandage*, whose Ends are to lay over one another on the Wound, and be pulled indifferent tight; then over that, Slips of Linen Cloth, *six or eight double*, laid right up and down at about a Finger's breadth distance one from another, quite round the Limb, except upon the Wound; and over every one of them, Splints of Pastboard tied on with three Tapes, one above and the other below the Wound, and the third so contrived that the Wound may be dress'd without untying the other two, or moving the Limb: and this must be tied not any ways hard. Then if need be, bleed; keep the Patient to a thin Diet, and his Body soluble; dress the Wound every Day, digest, mundify, incarn, &c. as in other Wounds.

Q. Suppose the Bone is not made bare, yet we look for a Piece of the Bone to come away?

A. (1.) If any Piece be loose in the Wound, take it away immediately; but if it sticks fast, use no Violence to it. (2.) Give free discharge to the Matter, and let not the Bandage be too hard.

hard. (3.) Dip all the Bandages in *Vin. Rub. & Ol. Ros.* (4.) When the Inflammation is over, use all your Endeavours, that the Bone may be thrust forth, which Nature will in time do; but it may be helped by Medicines, as *Cera, Citr. Euphorb. Rad. Aristol. or Tinct. Myrrh.*

Q. But suppose the Bone be made bare?

A. If no Pieces are separated, reduce it and defend it from the Air, and proceed as before taught, (in a Compound Fracture where the Bone is not made bare) only remember, not to use any oily or fat Applications, &c.

Q. Suppose the Ends of the two Bones lie over one another, so that you cannot by any means reduce them?

A. Then you are to saw off one of the Ends, and reduce them, and proceed as is already directed.

Q. How will you do if a Mortification seizes the Part?

A. Take off all the Dressings, scarrify, and apply hot Stupes, and proceed as I before taught in Chap. XLVIII.





C H A P. \ LI.

Of Dislocations in general.

Q. W H A T is a Dislocation ?

A. *Dislocation, Luxation*, or slipping out of Joint, is when the Head of some Bone is forced out of its own proper *Sinus* into another place.

Q. *How many sorts of Dislocations are there ?*

A. Three : (1.) When Bones are separate and gape, which before were joined, as when the *Scapula* parts from the *Humerus*, or the *Radius* from the *Ulna*, or the *Tibia* from the *Fibula*. (2.) When Bones are lengthened thro' Laxity of the Ligaments, and then the Head of the Bone starts a little out of its place, and is easily reduced. And, (3.) When the Bone is wholly out of its place ; and this is called a perfect Dislocation.

Q. *What are the Signs of a perfect Dislocation ?*

A. (1.) Motion is lost. (2.) An Hollowness appears from whence the Bone is slipt, and a Prominence on the contrary side of the Juncture. (3.) The Limb is generally shortned. (4.) That Limb is unlike the sound one, both in Figure and Site. (5.) There is joined to all the former, grievous Pain.

Q. *What are the Signs of that Dislocation where the Bones gape, or are separated ?*

A. (1.) The Thickness of the Limb is more than it naturally should be. And (2.) Where the Heads of the Bones meet, the Thickness is much greater.

Q. *What are the Signs of that sort of Luxation, when the Bones are lengthened ?*

A. (1.)

A. (1.) The Limb hangs dangling and disorderly, and turns any way. (2.) When the Bone is reduced, the Limb becomes of its natural length; and when it is let go, it immediately slips out again. (3.) There is a Cavity quite round the Joint.

Q. *What are the Signs of a Dislocation well reduced?*

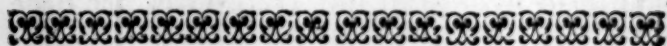
A. (1.) It is known by the Patient's Ease. (2.) By the natural Figure of the Limb and Joint, which if compared with the other, will be exactly like it. (3.) Motion is restored. And, (4.) The Head of the Bone generally *snaps* as it slips in.

Q. *How many Intentions of Cure are there in a Luxation?*

A. Four: (1.) Extension. (2.) Reduction. (3.) Bandage. (4.) To correct, or keep off Accidents. The (1.) is performed by Assistants or Pulleys. The (2.) by the Surgeon's Hand. The (3.) by handsome Rolling, Boulsters, &c. And the (4.) by fit Medicines, Bleeding, Purging, Diet, &c. Again, the (1.) must be done gently, for fear of Contusion, and avoid twisting about the head of the Bone, lest you break the Edge of its *Sinus*. The (2.) must be done speedily and effectually at once. The (3.) must be done so as to keep the Limb in its right Posture, and to prevent Inflammation. And the (4.) is done by *Astringents*, such as are prescribed in Fractures; and order every thing else according to Reason and Art.

Q. *Suppose the Dislocation be old?*

A. (1.) Endeavour to soften and discuss the Matter which is flow'd into the Joint, with *Diach. cum Gummi*, or Compositions *ex Rad. Altheæ, Fol. Mako. Far. Lini. Fœnugrec. Ol. Oliv. Axung. Porcin.* &c. having first well rubbed the Part; or hold the Limb often and long in a warm Bath, &c. and then proceed as in a new Dislocation.



C H A P LII.

Of particular Dislocations.

Q. **W**HAT are the Signs of luxated Jaws ?

A. If they be luxated on both sides,
(1.) The whole Jaw appears prominent forwards.
(2.) The Mouth cannot be shut. (3.) The lower
Teeth stand out further than the upper. (4.)
The temporal Muscles are stretched out *very torte*
and *hard*.

Q. How is it to be reduced ?

A. Put both your Thumbs (armed with double Boulsters) into the Patient's Mouth, and with your Fingers take hold of the outside of his Chin, then force the Jaw-Bone downwards, backwards and upwards, whilst some Assistant all the while holds his Head steady ; then anoint the temporal Muscles with *Ol. Rosar. & Lumbricor.* &c. and if need be, apply Astringents also. Then roll up the Parts *decently*, bleed him, and for three or four Days keep him to Liquids only.

Q. What are the Signs of a dislocated Shoulder ?

A. It is in Figure very unlike the sound Shoulder, having a Cavity on the top, and the head of the Bone may be felt prominent in the *Axilla* or Armpit ; the upper Process of the *Scapula* appears sharp ; the Arm cannot be brought to the Ribs ; and lastly, it is longer than the other Arm, and attended with extreme Pain. Thus far of the Signs of a Shoulder dislocated downwards, which it most commonly is ; and if it be luxated forwards, the Signs will be evident without any Direction.

Q. How is the Shoulder to be reduced ?

A. So-

A. Seven several ways; viz. (1.) By *Circumrotation*, when you or the Patient puts the Fist doubled under the Armpit, so that the middle Knuckles may force the Bone into its place, whilst with your other Hand you make moderate Extension, and keep the Bone in a circular Motion: but this is to be used only to Children and tender Bodies. (2.) Let the Patient sit; then put your Head to the Patient's Shoulder, and your Fingers under his Armpits, and then your self, or some Stander-by, press the Patient's Elbow (with the Knee) towards his Ribs. (3.) Lay the Patient down upon the Floor, on which do you sit down also, and take hold of the dislocated Arm with both your Hands, and put your Heel under his Armpit, (having first placed a Ball there) and then let a Servant take hold of the opposite Arm, and draw it downwards; and another having a strong Roller, (so broad as may take hold of the Ball, let him take hold of both its Heads, and draw them up towards the Patient's Head, and with his Foot press upon the dislocated Shoulder, by which the Head of the Bone will slip in. (4.) Let the Patient stand upon a Stool, and place his dislocated Arm over a tall Man's Shoulder, who must hold the Arm fast down before his own Breast; then let some one trip away the Stool, that the Patient's Weight may cause the Bone to snap in. (5.) Set the Patient near some Post, and let a Pole, with a Prominence fix'd in its middle, (which we call a *Colt-Staff*) be held between two strong Men, then let the Patient's Arm be put over the Pole, with the Prominence fixed close to his Ribs, up close to the Head of the Bone; then let your Assistant hold down his Arm, extending it very strongly, and pressing it towards his Ribs, or else with a Pulley fastned to the Post,

H and

and to his Arm above his Elbow, to make Extension that way ; and then you must stand on the contrary side, with both your Hands on each side of the *Scapula*, to press it down, and to keep the Patient firm in his Seat, and govern the Operation. (6.) Over a Ladder, which is to be managed much as that over a Man's Shoulder. (7.) By the *Glossocanium* or Commander, which is to be used with Caution in tough Bodies, and where the Bone has been long out. These are the most common ways now in use. This being done, apply your Dressings, place a good Broussard under the Arm, and roll him up, and bleed him, and keep his Arm quiet, till the Joint gathers Strength, and that the Inflammation and Swelling are over.

Q. Suppose a Dislocation of the Shoulder, and a Fracture on the Os Humeri ; which would you reduce first ? And why ?

A. I would reduce the Dislocation first, because if I did not, I should displace the fractur'd Bones, by reducing the Dislocation after the Fracture, and so cause new Work, and Pain to the Patient, and act inartificially and preposterously.

Q. We will now discourse of the luxated Elbow, pray tell me how many ways is the Ulna or Cubit luxated ?

A. Forward or backward, outward or inward, and sometimes the *Radius* follows, and sometimes it does not. If it be luxated forward, the Arm cannot be bent ; the Cubit is shorter ; a Tumor appears on the fore-part, and a Cavity behind ; if backward, the contrary : and so if outward or inward, by the same Tumor and Cavity you may judge of it.

Q. How is it to be reduced ?

A. If the Luxation be forwards, Extension must be made obliquely by two Assistants ; then let a hard

hard Body of Linen be placed on the inside of the Joint, and over that a Girt so long as that you may put your Foot into it. Then whilst they make *due Extension*, by your Foot in the Girt, and by your Hands) bend it, and reduce it; or in tender Bodies it may be done by your Hands alone. If the Luxation be backwards or *recent*, it is easy to reduce by the Hand alone, if an *oblique Extension* be made very strong. If it be slipt inwards or outwards, it is to be reduced the contrary way; then embrocate *cum Ol. Rosar. & Aceto*, and apply your Restrictives, make decent Bandage, place the Arm in a middle Posture, bleed the Patient, keep him to a cooling Diet, and his Body soluble.

Q. How many ways may the Carpus, or Wrist, be dislocated?

A. Inward, outward, forward and backwards; but commonly forward.

Q. What are the Signs of this Luxation?

A. A Tumor on the fore-part, and the Fingers cannot be bent; if it be backward, the Fingers cannot be extended: if it be inward or outward, a Tumor appears on one side, and a Cavity on the other.

Q. How are these Luxations reduced?

A. If the Luxation be either forward or backward, the Hand must be laid upon some Table, with the back downwards, if the Dislocation be forwards; and if it be backwards, the contrary: then let good Extension be made, and with your Hand force the Bone into its place.

Q. How are the luxated Bones of the Carpus and Metacarpus to be reduced?

A. By a moderate Extension, laying the Hand on a Table, and some hard Substance put under it, &c. Then apply fit Medicines, Rolling, &c. as has been taught.

Q. How many ways may a Thigh be dislocated?

A. Outwards, inwards, forwards, and backwards; but ofteneft inwards, becaufe there the Edge of the *Acetabulum* is loweft, &c.

Q. What are the Signs of fuch a Luxation?

A. If the Luxation be inwards, that Thigh appears longer than the other, and the Knee, Leg, and Foot ftands outwards, and a Tumor appears near the *Perinæum*. If the Luxation be outwards, the Signs are contrary, that Leg is fhorter; near the *Perinæum* there is an Hollownefs, the Knee, Leg, and Foot, ftand inwards, and the Heel cannot touch the Ground. If the Dislocation be forwards, the Thigh cannot be bent, Urine is ftopt, the Groins fwell, and the Buttocks appear wrinkled. If it be dislocated backwards, the Leg cannot be extended, that Thigh is fhorter than the other, that Heel cannot touch the Ground, the Groin appears loofe, and the Head of the Bone fticks out backwards.

Q. How is this Dislocation to be reduced?

A. It is with great difficulty that it is done, efpecially if it has been long out of place; however, if it be new and in tender Bodies, it may be reduced even with fmall Extension fometimes, if you fuddenly bend the Thigh. (2.) Let an Affiftant hold the Patient faft by the Armpits, and another take hold of the Thigh above the Knee, with both his Hands, and make Extension, then do you with your Hands force in the Bone. (3.) Let a wooden Pin be drove into the Floor, then lay the Patient flat on his Back, with the Pin between his Legs, placed clofe up to the Head of the Bone, with a thick hard Boulfter between them; then make faft the contrary Leg and Thigh, and endeavour to keep his Body very fteady; then apply a ftrong foft Roller feveral times about the

the dislocated Thigh, to which a Cord or Pulley must be fixed, with its other End at some distance; then an Assistant must pull strongly upon the Cord, to make Extension, whilst you manage the Bone to reduce it with your Hands.

Q. How many ways may the Knee be dislocated?

A. Outward, inward, and backward.

Q. What are the Signs of it?

A. They are very evident. There is an unusual Tumor on one side, and a Cavity on the other, Motion is weakened, and the Figure is depraved.

Q. How is it to be reduced?

A. Let two Assistants make Extension, one above, and the other below the Knee, near the Foot; and you must at the same time force the Bone into its place; then dress and roll, as has been directed.

Q. How many ways may the Ankle be luxated?

A. Inward, outward, forward, and backward.

Q. What are the Signs of it?

A. If it be dislocated inward, the Sole of the Foot turns outward; and if dislocated outward, it turns the contrary way: If forward, the broad Tendon of the Heel, called *Nervus Hectorius*, or *Tendo Achilles*, is very stiff and hard, and the Foot is less: If the Dislocation be backwards, the Heel is almost hid, the Sole of the Foot seems bigger, and the Foot longer.

Q. How is it to be reduced?

A. By good Extension and Reposition, and cured as other Luxations; only the Patient must there keep his Bed longer, (at least thirty or forty Days) otherwise the Joint will slip out again upon every slight Occasion; or at best, will be a long time weak, &c.

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Q. *What are those which Surgeons call Vulnerary Herbs ?*

A. Such as these ; *Scabiosa, Sanicula, Auric. Muris, Tanacet. Verban. Symphit. Hyperic. Bistort. Tormentil. Vinc. per Vinc. Centaur. min. Borag. Marrub. Betonic. Valerian. Alchimil. Card. Ben. Flor. Cordial. Agrimon. Osmund. Regal. Scordium, Ulmaria, Tussilag. Plantag. Bursa Pastoris, &c.* Out of which, Drinks are to be made, as Occasion offers.



C H A P. LIII.

Of Phlebotomy or Blood-Letting.

Q. *W* *HAT are the Use and Effects of Phlebotomy ?*

A. By it the Blood is altered both in Quantity and Quality.

Q. *What Inconveniences follow its too frequent Use ?*

A. The Blood thereby becomes more sulphureous and less salt, and so disposes Men to be both feverish and fat.

Q. *That it gives Relief when Blood offends in Quantity, is plain ; But how does Phlebotomy correct the Temperament of the Blood, when it offends in Quality ?*

A. If any thing contrary to it be mixed with its Mass, the Blood flowing out, upon a Vein being opened, carries much of that foreign Matter out with it, by which the rest is more easily conquered and expelled ; for the Orifice being once opened, Nature rallies all her Force to expel her Enemy ; the fermenting Blood gathers together the

the heterogeneous Particles, and excludes them with the first Blood that flows ; from whence it is, that in breathing a Vein, the *first* Porringer of it shall be mere *Putrefaction* ; the *second* something better ; and the *third* very good Blood, as every Surgeon may observe.

Q. Does Bleeding restore the Blood to its right Temperament, when it is declining from it ?

A. Yes : for when its Mass, by the Sulphur or fixed Salt is exalted, and degenerates into a saline Sulphureousness ; some of it being let out, a new Fermentation immediately arises, and the Sulphur and fixed Salt being overcome, the Spirits recover their Dominion. And for this Reason, Phlebotomy is by some administred as well in the beginning of a Consumption, Scurvy, and Jaundice, as in a Fever ; but Caution is to be used.

Q. Do all Distempers indicate Phlebotomy ?

A. No ; if the Mixture of the Blood becomes very bad, as in the Plague and malignant Fevers ; or if the Discrasy of the Blood shall be such, that the Spirit, volatile Salt and Sulphur shall be depressed, and the terrene or aqueous Particles predominate, then the Blood ought to be preserved and not sent out ; wherefore in a [confirmed] Consumption, Cachexia, Dropsy, &c. if you bleed, you murder the Patient.

Q. From what Part of the Body is it best to draw Blood ?

A. According to the Laws of Circulation, it should seem not much to matter from what Part it be taken, so it be but large enough ; yet it equally flowing from all Parts to the *Vena Mediana* of the Arm, we generally open that ; notwithstanding, (according to common Practice, but how rational that is, I dare not determine) if it ought to be called back from the superior Part of the Body

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to the inferior, (as when the *Menstrua* or Hemorrhoids are suppressed) it is thought most proper to bleed in the Foot.

Q. *At what time of the Disease is Phlebotomy to be celebrated?*

A. At the *Beginning* or *Increase*, but hardly in the *State* or *Declination*.

Q. *Why?*

A. Because at that time Nature is *busy*, endeavouring a *Crisis*, and the Blood very much ferments, so that Nature ought not to be disturbed. Besides, at the height of the Disease, if Nature is *Conquering*, she does not want this Relief; and if she be overcome, she will not endure such an Evacuation.

Q. *What time of the Day is best for the Operation?*

A. When there is a Necessity, it may be done at any Hour of the Day or Night; or (otherwise) a Morning is rather to be chosen, when the Stomach is empty, and the Vessels emptied by Sweat, the Blood quiet, and appearing free from any *serous Filth*; or it may be deferred till the new Juice of things eaten be passed into the Blood, for the Vessels being emptied, are both apt to snatch the *crude Chyle*, and what is disagreeable to the Blood also, into themselves.

Q. *What Quantity ought to be taken away?*

A. In a burning *Fever*, *Pleurisy*, *Peripneumonia*, *Quinzy*, *Apoplexy*, and other grand Diseases, that have their Original from a *Phlegmonick Incurfion* of the Blood, if it be not taken in a large Quantity, it does more harm than good: And on the contrary, in weak and tender Constitutions, and in *Dropsies* and *Cacochimia's*, it is not to be rashly done; or if allowed for *particular Reasons*, it must be in *small Quantities*.

Q. *Is*

Q. Is a large or small Orifice, the most convenient?

A. All ingenious Men give their Votes for a large one.

Q. Why so?

A. Because if it flows with a small Stream, or Drop by Drop, the Mass of Blood fermenting, will separate into Parts, and what is more Spiritous will burst out, whilst the thicker remains behind; besides an *Ecchymosis* and Tumor, is apt to remain after it.

Q. Wherein lies the Danger in opening a Vein?

A. In pricking an Artery or a Tendon.

Q. How shall we know how to avoid it?

A. In opening the *Jugular Vein*, or the *Vena Cephalica*, there is no Danger, except a Man is mad, and will plunge in his Lancet without Thought: But in the *Mediana* and *Basilica* there is; for under or near the one lies a Tendon, and under the other an Artery.

Q. What is a Tendon?

A. It is a simple Part, diffused thro' the whole Body of a Muscle lengthways, which in some part is united, and in some divided and stuffed with Flesh; softer than a Ligament, and harder than a Nerve; it is the principal Part of a Muscle, and the chief Instrument of Action.

Q. What is an Artery?

A. It is a common Organ, round, long, and hollow, consisting of a double Coat, proceeding from the Heart, fit to carry Blood and vital Spirits to all Parts.

Q. What Signs follow a Tendon being pricked?

A. Extreme Pain, a Flux of Humours, a Mortification, Fever, Ravings, and Convulsion.

Q. What are the Signs of an Artery wounded?

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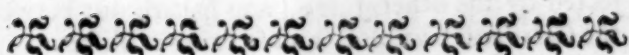
A. The Blood is very florid, it flies out impetuously, by Leaps and Spurts, and will not stop, nor suffer the Orifice to heal.

Q. *How are the Hurts of these remedied?*

A. With great difficulty; but as to the particular Cure, see Chap. XLV. as to the Hurts of a *Tendon*: But if an *Artery* be punctur'd, Ligature is to be made above the Puncture, and the superficial Parts carefully divided, to come at the *Artery*, and then by passing a Silver Hook or Needle under it, Ligature is to be made, both above and below, and divide the *Artery* at the Puncture, and the two Ends will in some time digest off, and the Wound may be cured as other Wounds. All other ways by Astringents, or by the actual or potential Cautery, are more dangerous, and precarious; tho' if *this* cannot be done, *those* may, some of them, be attempted; for it must be done, one way or other, or the Patient will lose his Life or Limb.

Q. *Why is so small a thing as the Puncture of an Artery of such difficult Cure, when that of a Vein heals of itself?*

A. Not that the Coats of an Artery are more Nervous than those of a Vein, but because an Artery (like the Heart it self,) ought constantly to shake and beat; its Fibres repeating perpetual *Systole* and *Diastole*: wherefore a small Puncture being made in its Pipe, by reason of the continual Motion of the Vessel, and the *Efflux* of Blood, it remains very often incurable, or at best, of very difficult Cure.



CHAP. LIV.

Of Vesicatories or Blisters.

Q. **H**OW do Vesicatories, or Blistering Medicines operate?

A. The manner how *potential Fires* operate, is best found out by enquiring how *actual Fire* does raise a Blister; of which it is observable, that the *fiery Particles*, being not too vehemently applied, penetrating the *Cuticula*, without Solution of Unity, enter under the *Cutis* it self, where the Ends of the *Blood-bringing Vessels*, and of the Nerves, and nervous Fibres, are terminated; and there do variously twist together these, altering their Position, and perverting the Structure of the whole Texture of the Skin; insomuch that from the Vessels being made angry, the watry Humour being mixed with fiery Particles, and therefore rejected both by the Blood and nervous Juice, is spewed out in great Quantities. Now this *Lympha*, because it cannot pass thro' the *Cuticula*, separates it from the *Cutis*, and raises it into that *bladdery Form* which we call a *Blister*. So *Cantharides* being applied to a Part, and heated by its *Effluvia's* and so provoked to exert their *poisonous Energy*, do abundantly dispatch out fiery Particles, which penetrate the *Cuticula* without any Laceration; they are thrown upon the Skin, where they first act upon the Spirits, and then upon the Humours and solid Parts; they dissolve the Humours, excite painful Convulsions of the *Fibres*; and the Humours being dissolved, are constrained to separate into Parts; and its watry Part, which is tainted by
the

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the venomous Particles of the *Cantharides*, is rejected by the other Juice, and *spewed* out between the *Cutis* and *Cuticula*, and so raises a Blister.

Q. Why does Blistering often bring a Heat and Scalding in the Water, and sometimes a Dysuria or Strangury?

A. The *serous Juice* cannot always bear all the sharp Parts of the Medicine back the same way they entered, but sometimes armed with some of its venomous Particles, flies back into the *Mass of Blood*, and circulates with it, and is ejected thro' other *Emunctories*, and offends some tender Channels in its Passage; and amongst the rest, being separated by the Kidneys; it hurts *them*, the Neck of the Bladder and urinary Passage, and corrodes the Parts, and so causes Pain in making Water, &c.

Q. What gives Relief in that Case?

A. Nothing better than a Decoction of Mal-lows, either in Milk or Water. Also *Camph. Diss.* in *Conserv. Cynosbat.* once in three Hours; which Method will effect a Cure, altho' the *Cantharides* have been taken inwardly, if not too many.

Q. In what Diseases are Vesicatories profitable?

A. In all *cutaneous Distempers*, also in malignant Fevers, Head-Ach, *Vertigo*, *Sapor*, in *Defluxions* of the Eyes, Nose, Palate, or Lungs, *Convulsions*, *Epilepsy*, *Apoplexy*, *Lethargy*, &c.

Q. In what Diseases are they hurtful?

A. Those that are subject to the Stone, Gravel, or Strangury, find *Vesicatories* very *vexatious*; wherefore they are *there* to be forbore, unless a very urgent Necessity indicate the contrary.

Q. Why is it an ill Sign when they do not rise as usual?

A. Because it shews that the *Animal Spirits* are dejected or diminished to a great degree; and *all*
the

the Art of Man cannot make them operate on a dead Body ; from whence it's plain, that when they do operate, they do it upon the Spirits. Wherefore when a good Vesicatory is applied, and no Blister arises, we have Reason to fear that they are exhausted, and so consequently Death at hand ; yet this Rule is not without its Exceptions, as I have sometimes found.

Q. Our common way of strowing the Powder of the Fly, over the common Plaister, sometimes causes many small Blisters round about, and a very little or no Blister where it ought to be, to the vexation of the Patient, and Scandal of the Surgeon : Is there no way to compose a Vesicatory Plaister, that will stick, and do its Office, without strowing it over with Powder of the Flies ?

A. Yes ; I here give you a Recipe that never fails, if the Materials are good.

R. Resin. clar. ℥iiss. Cer. flav. ʒvj. Sev. pro Empl. Melilot. ℥j. Pic. Burgund. ʒxx. Pulv. Cantharid. select. ℥ij. Ms. & fiat Empl. S.A.

This you may depend on, without adding fresh Flies ; but if the Heads and Wings of the Flies were first thrown away, it would be the better.



CH A P. LV.

Of Fontanels or Issues.

Q. IN what Parts are Issues generally ordered to be made ?

A. If it be for a general Evacuation of Humours from the whole Body, let it be made in the Arm ; or if it be for Revulsion from some particular Member, make it far distant from the Part affected ;
or

or if it be for *Evacuation* from some particular Member, make it near the Part affected.

Q. In what particular Parts of the Body, and for the Cure of what Diseases, are Issues generally made?

A. Some for evacuating Humours out of the Brain, prescribe one on the *Coronal Suture*; or in the fore-part of the Head over the *Sagittal Suture*; or in the hinder-part of the Head about the beginning of the *Lambdoides*: some make it in the *Nape* of the Neck; some on either side the *Spine*, or between the Shoulders, or behind the Ears. Issues in the *Back* are accounted helpful in *Gouts*, *Stone*, and *Cholick*, by evacuating the Matter that feeds them; those between the Shoulders on the Arm and Thigh, help *pectoral Diseases*; and (they say) one made *between the Ribs*, helps a *Consumption*: they are made in the *Groin* for Weakness of the Loins, and to cure *rebellious Sciatica's*. Sometimes they are made on the Thigh; but it is far better to make them on the inside of the Leg, a little below the Knee.

Q. In what Part of the Member is an Issue most safely cut?

A. Not in the Body of a *Muscle*, but in the distance between them, because of the *Tendons*, which the Pea pressing upon, may cause Pain, Inflammation, Fever, and worse Accidents; wherefore let it be made clear of all large Vessels and *Tendons*.

Q. How are they to be made?

A. Either by *Incision*, or *Cautick*, about both which it is needless to say any thing, the Operation is so common.

Q. In what Diseases do they principally prevail?

A. In almost every Disease in the Head, outward or inward; *Convulsion*, *Sore Eyes*, *King's-Evil*, *Head-Ach*, *Cramp*, *Cough*, and *Consumptive Spitting*,

an *Asthma*, and in *Hypochondriac*, *Hysterie* and *Cachectical* Cases.

Q. Suppose an Inflammation seizes it, how is it to be got off?

A. By emollient Fomentations and Cataplasms, such as are before prescribed; also evacuate by bleeding and purging, and keep the Patient to a slender Diet.

Q. But if it runs too much, a thin, stinking, discoloured, ichorous Matter, how is this to be remedied?

A. Let the Patient use a regular Course of Diet, without any Excess; let him avoid small Wines, and Cyder, and all acid Liquors; let the Issue be kept very clean, and dressed twice a Day.

Q. But what if it tends to Putrefaction?

A. Then in the room of a Pea, make a Pill of *Virgins Wax*, incorporated cum *Santal. Rub. & Virid. Æris*, and put it in, and use a Fomentation twice a Day, &c. or dissolve *Vit. Rom.* 3j. in *Aq. Font.* ʒviij. in which put a quantity of common Peas, and let them lie a Night, then take them out, and dry them well, and use them as other Peas; and these (as I am told) are much used in our Hospitals, at this Day.

Q. But if it grows dry, and will not run, what will you do?

A. Then I would use a Pea armed with *Epispastic Plaister*; or Peas of *Box*; or of *Hermoadactils* alone, which is excellent.

Q. What Humours do they evacuate?

A. All those gathered within the Pores of the Skin, or Glands, are brought thither by the *Arteries* or *Nerves*, have their Conflux to Issues, and not only so, but the *serious Recrements* under the Skin, which are wont to be transferr'd, or creep between the *Interstices of the Muscles*, or Membranes

branes from place to place, have their Passage out at the Fontanel also.

Q. Here has been a great Noise about Dr. Colbatch's vulnerary Powder, which stops all Hemorrhages, and cures Wounds almost miraculously: Also the famous Stiptick Water, prepared by our great Oculist, Sir Neither-write-nor-READ: And the celebrated Salt of Lemons. Pray what is your Opinion of them, and how do you think they are prepared?

A. As to the vulnerary Powder, it is certainly a very good Medicine; and according to the following *Recipe* I have prepared it, and find it even the same with the Original: And which I shall here communicate.

R Limatur. Martis, q. v. affunde Ol. Vitriol. ad trium digitorum supereminentiam, post Ebullitionem filtretur. Hujus Olei p. 1. Sacc. Saturni. p. 2. simul ad siccitat. evaporentur; pulv. qui relict. est, Spir. Vin. Rect. deflagrentur. & deinde servetur ad usum.

The Use and its wonderful Effects may be found in the Doctor's printed Book.

As to the *Stiptick*, I take it to be but a very indifferent Medicine; but such as it is, I here shall communicate the Prescription, being very sure, that it is the same with the Original, as any Person may find by comparing them together, viz.

R Aq. Font. Cong. j. Alum. com. ℥j. Aloes opt. ʒj. Cochin. pulv. subtiliss. ʒj. coq. Sem. Hor. & filtretur.

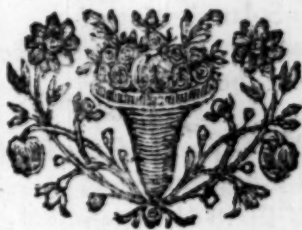
This Medicine may be of use inwardly, to restrain Fluxes of Blood, either by Urine or otherwise; but that it is of such external use as the *Gazette* has formerly made us believe, no wise Man can suppose.

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As to the Salt of Lemons, every Chymist knows, that Lemons afford so little Salt, that the very Pretence of selling it at a moderate Price, shews it to be a mere Trick. However, what is called the Purging Salt of Lemons, I here give you the *Recipe* of; and is certainly a pretty Cathartick.

℞ *Tart. vitriolat.* ℥j. *Resin. Jalap.* ʒij. *Spir. vel Essentiæ Limon.* ʒss. *misce S. A.* Powder what is to be powdered; and mix them with the Spirit, or Essence, and keep them in a close Box from Air. Dose ʒss. or ʒij. *plus minus.*

The End of the Chirurgical Part.



C H A P.



C H A P. LVI.

Of the most Principal Things necessary to be first known and understood in Anatomy, by every young Surgeon.

Q. **W**HAT is Anatomy?

A. It is an artificial Dissection of the Body, in order to know its Parts; and is divided into *Osteology* and *Sarcology*.

Q. *What is Osteology?*

A. It is that part of it which treats of the Bones, Cartilages, &c.

Q. *What is Sarcology?*

A. It is that part of it which treats of the Flesh and the soft Parts; and is divided into *Splanchnology*, *Myology*, and *Angeiology*.

Q. *What is Splanchnology?*

A. It is that part which describes the internal Parts, especially the *Viscera*.

Q. *What is Myology?*

A. It is a Description of the Muscles.

Q. *What is Angeiology?*

A. A Description of the Nerves, Veins, Arteries and Lymphaduct Vessels.

Q. *What is a Bone?*

A. It is a similar Part, dry, cold, hard, inflexible and insensible, giving Strength and Form to the whole Body.

Q. *What is a Cartilage or Gristle?*

A. It is a similar Part, cold, dry, flexible, but insensible, and not so hard as a Bone, except by Age it degenerates; it has neither Membrane, Nerve,

Nerve, Cavity, nor Marrow ; but they have a *Mucosity* that preserves them flexible : their use is, to cover or line the Bones in their Articulations, for their easier Motion.

Q. What is a Nerve ?

A. They are the Organs of Sense, long, round, white Bodies, covered with two Membranes, made of the *Dura* and *Pia Mater*, composed of Fibres, springing from the Cortical Part of the Brain and *Cerebellum*.

Q. What is a Tendon ?

A. It is a similar Part, of a *peculiar kind*, diffused through the whole Body of a Muscle *lengthways*, which in some part is united, and in some divided and filled with Flesh, but mostly possessing the Head and Tail of the Muscle, yet only in such as have Bones to move. It is softer than a Ligament, and harder than a Nerve ; or it is a *Prolongation of the Fibres freed from the Parenchyma, and clothed with the investing Membrane of the Muscles.*

Q. What is a Muscle ?

A. It is an *Organical Part*, and is a Texture of Fibres, consisting of Nerves, Arteries, Veins, and Lymphatick Vessels, and is the Author of voluntary Motion. It is called, *Mûs*, a Mouse ; either because it resembles a flea'd Mouse, or else from *Mûs*, to contract, which is the Action of a Muscle.

Q. What are the Arteries ?

A. They are long, round, hollow Vessels, consisting of four Coats, commencing from the left Ventricle of the Heart, where they receive the Blood that they distribute to all the Parts of the Body.

Q. What are the Veins ?

A. They

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A. They are Membranous Conduits, consisting of four Coats, which receive the Blood from all Parts of the Body, in order to convey it back to the Heart.

Q. What is a Ligament ?

A. It is a solid and white Substance, softer than a Gristle, and harder than a Nerve ; being of a middle Nature between a Cartilage and a Membrane : its Use is to tie the Parts of the Body together, chiefly the Bones.

Q. What is a Fibre ?

A. It is a Body like a Thread ; slender, tenacious and irritable, made for the sake of Strength and Motion.

Q. How many Bones are there in the whole Body ?

A. Our Moderns generally reckon 249.

Q. As how ?

| | | |
|---|---------|----|
| <i>A.</i> In the Cranium | — — — — | 14 |
| In the Face (reckoning the <i>Os Hyoides</i>) | — | 46 |
| In the Trunk | — — — — | 67 |
| <i>viz.</i> In the Spine thirty two, in the Breast | | |
| twenty nine, and the six <i>Ossa Innominata</i> , | | |
| <i>viz.</i> the two <i>Ischia</i> , the two <i>Ilia</i> , and the | | |
| <i>Ossa Pubis</i> . | | |
| In the Arms and Hands | — — — — | 62 |
| In the Legs and Feet | — — — — | 60 |

In all 249

Q. How are the Bones joined together ?

A. Either by Articulation or Symphysis.

Q. What is Articulation ?

A. It is the natural Conjunction of two Bones touching one another by their Extremities ; there are two kinds of it, *viz.* *Diarthrosis* and *Synarthrosis*.

Q. What

Q. What is Diarthrosis?

A. It is an Articulation, in which the Motion is manifest; and is divided into (1.) *Enarthrosis*. (2.) *Arthrodia*. (3.) *Ginglimus*.

Q. What are they?

A. *Enarthrosis* is when a large and long Head is received into a deep Cavity, as the Head of the *Os Femoris* into the Cavity of the *Os Innominatum*. *Arthrodia* is when a superficial Cavity receives a flat Head, as when the Head of the *Humerus* is received into the *Glenoide Cavity* of the *Scapula*; or the Heads of the *Metacarpus* or *Metatarsus* into the Cavities of the first *Phalanx*, or rank of the Bones of the Fingers, &c. *Ginglimus* is an Articulation in which two Bones do mutually receive one another, as the Bone of the *Carpus*, which is received into that of the *Os Cubiti*, and the *Os Cubiti* into that of the *Carpus*.

Q. What is Synarthrosis?

A. It is an Articulation so strong and firm, that it has no distinct Motion; and is divided into *Sutura*, *Harmonia*, and *Gomphosis*.

Q. What are they?

A. *Sutura* or Suture, is when two Bones are joined together, like the Teeth of two Saws; and this is only in Bones of the Skull. *Harmonia* is an Articulation, wherein the Bones are joined in a *simple streight Line*, or a *Circular*; as the Bones of the Face, Nose, and Palate. *Gomphosis* is a compact Articulation, when one Bone is sunk or driven into another, like a Nail into a Piece of Wood; and thus the Teeth are fastned into their Sockets.

Q. What is Symphysis?

A. It is either with some intermediate Substance, or without it; that without it, is like a Tree

Tree and its Graft : and thus Nature by hardening the Bones of the lower Jaw, and the *Epiphysis* belonging to it, does so join them, that they make one continued Body. *Symphisis* with some intervening Body, is divided into, (1.) *Synneurosis*. (2.) *Sysarcofis*. (3.) *Synchondrosis*.

Q. *What are they ?*

A. *Synneurosis*, is when Bones are united by means of intervening Ligaments, as in the Articulation of the *Rotula* with the *Tibia*. *Sysarcofis*, is when Bones are joined by means of Flesh, as the *Os Hyoides* with the adjacent Parts, &c. *Synchondrosis*, is when Bones are united by a Cartilage, as the two Bones of the *Os Pubis*, &c.

Q. *Are there no other Kinds of Articulation ?*

A. Yes ; the Articulation of the Ribs with the *Vertebrae* of the Back, and the Bones of the *Carpus* and *Tarsus*, one amongst another, and that is called *Amphiarthrosis* ; and there are some others of lesser moment, which I shall admit for Brevity's Sake.

Q. *What is an Apophysis of a Bone ?*

A. It is a Protuberance, which rises on the Superficies of the Bone, with which it has the very same Continuity ; and such is the Prominence you see on the *Os Petrosum*, called *Apophysis Mastoides*.

Q. *What is an Epiphysis of a Bone ?*

A. It is an Apendage, or additional Bone, joined to the principal by a simple Contiguity ; and such is the Prominence you see on the *Os Tarsi* : Its use is, (1.) to strengthen the Articulation ; and (2.) to insert divers Muscles and Ligaments.

Q. *Has every Bone its Epiphysis ?*

A. No ;

A. No ; the lower Mandible has none of them, the Ribs have each of them one ; the Bone of the Leg and of the Arms have each of them two ; those of the *Os Ilium* three ; those of the *Femur*, four ; and each *Vertebra* five of them : In Infants they are Cartilaginous, but harden as Years advance, till about the 20th Year they convert into Bone.

Q. How are Bones nourished ?

A. By Blood ; though the Marrow does serve to moisten them, as the Fat does other Parts ; they all contain a Marrow, yet they want Sense, though they are all (except the Teeth) covered with their *Periosteum*, which is very sensible, being a thin, *nervous Membrane*.

Q. What is the Spine ?

A. It contains all the Bones from the first *Vertebra* of the Neck (called *Atlas*) unto the *Coccyx* or Rump-Bone.

Q. How are the *Vertebrae* divided ?

A. The Neck has seven, the Back twelve, and the Loins five ; in all twenty-four.

Q. How many Ribs are there in the Body ?

A. They are in Number twenty-four, *viz.* twelve on each side ; the seven Superior are called *true*, and the five Inferior *false*, or short Ribs.

Q. How many Teeth has a full-grown Person ?

A. Sixteen in each Jaw, in all thirty two ; and consist of three sorts, *viz.* (1.) *Incisores* or Cutters, and are those which we call the *Fore-teeth* ; each Jaw has four of them, and they have but one *Phang* a-piece. (2.) *Canini*, or Dog-Teeth, they are in number four ; in each Jaw there are two, at each side of the Cutters one ; they are otherwise called *Eye-Teeth*, and have but single *Phangs*, (3.) *Molares* or Grinders, because like Mill-Stones they grind the Meat ; they are in number twenty,
(*viz.*)

(viz.) five on each side of each Jaw, the two foremost have but two *Phangs* at most, but the others commonly three or four.

Q. *Name the Sutures?*

A. They are the *Coronal*, *Lambdoidal*, and *Sagittal*. The *Coronal* Suture extends from one Temple to another, and joins the *Os Frontis* with the two Bones of the *Sinciput* or fore-part of the Head. The *Lambdoidal* Suture is so called, because it is made like the Greek Letter Λ ; it is opposite to the former, and unites the *Os Occipitis* with the two Bones of the *Sinciput* behind. The *Sagittal* Suture is placed on the superior Part of the Head, and goes from the *Coronal* to the *Lambdoidal*.

Q. *How many sorts of Hurts is the Scull subject to?*

- | | |
|---|---|
| A. (1.) <i>Depressio</i> , a Depression. | } Called Compound Fractures in <i>Cranio</i> . |
| (2.) <i>Concameratio</i> , a Vaulting. | |
| (3.) <i>Excisio</i> , a Part cut away. | |
| (4.) <i>Fractura</i> , a Fracture in a strict Sense, where both Tables are broke. | } Commonly termed Simple Fractures in <i>Cranio</i> . |
| (5.) <i>Sedes</i> , or the Print of the Weapon wounding. | |
| (6.) <i>Rima</i> , <i>Fissura</i> , or Chink. | |
| (7.) <i>Contusio</i> , a Contusion. | |
| (8.) <i>Dissolution</i> of a Suture, (viz.) when it gapes or separates. | |
| (9.) <i>Collision</i> of a Suture, (viz.) a Contusion of its Brims. | |
| (10.) <i>Contra Fissura</i> , a Fissure in the opposite Part to that where the Blow was received. | |

Q. *What*

Q. What are the Ulna and Radius, Tibia and Fibula?

A. They are the greater and lesser Bones, or *Fossiles* of the Arm and Leg.

Q. What is the Carpus?

A. It consists of eight Bones, and is situated between the lower Articulation of the *Ulna* and *Metacarpus*.

Q. What is the Metacarpus?

A. It is that Part which is between the *Carpus* or Wrist, and Fingers, and is composed of four Bones.

Q. What are the Bones which make the Tarsus or Instep?

A. It consists of seven Bones, (*viz.*) the *Astragalus*, *Calcaneum*, *Naviculare*, *Cuboides*, and the three *Cuneiformia*.

The *Astragalus* (or *Talus*) has in its upper part a convex Head, which is articulated with the *Tibia* and *Fibula* by *Ginglymus*; its fore-part, which is also convex, is received into the *Sinus* of the *Os Naviculare*: Below, towards the hind-part of the under-side, it has a moderately large *Sinus*, which receives the upper and hinder-part of the *Os Calcis*.

The *Os Calcaneus*, or *Calcis*, or the Heel-Bone, lies under the *Astragalus*, to which it is articulated by *Ginglymus*: Behind, it has a large Protuberance, which forms the Heel, and into which the *Tendon Achillis*, or large Tendon of the Heel, is inserted.

The *Os Naviculare* lies between the *Astragalus* and the three *Ossa Cuneiformia*, and has its Name from the resemblance it bears to a Ship, and is therefore sometimes called *Cymbiforme*, from its likeness to a Boat: Behind, it has a large *Sinus*; and

I

before

before, it is convex, distinguished into three Heads.

The *Cuboides*, or *Os Cubiforme*, is joined *behind*, to the *Os Calcis*; *before*, to the two outer Bones of the *Metatarsus*; and on its *inside*, to the third *Os Cuneiforme*.

The *Ossa Cuneiformia* are so called from their Wedge-like Shape, and lie all three at the side of one another: The *inmost* is the *largest*, and the *middlemost* is the *least*; their *upper-side* is *convex*, and their *under*, *concave*; by that means hindering the Muscles and Tendons of the Feet from harm, when we go.

Q. *What is the Metatarsus?*

A. All that part between the Instep and Toes, and consists of five Bones.

Q. *What is properly called the Thorax?*

A. The *Thorax* or Breast, is the whole Cavity that reaches from the *Claviculæ* or Collar-Bones, to the *Diaphragma*, or Midriff; it contains the Heart, Lungs, part of the Windpipe and Gullet, the *Arteria Magna*, *Vena Cava*, and *Ductus Thoracicus*.

Q. *How many Nerves are there in the whole Body?*

A. They are counted by Pairs, and in the whole there are forty Pair of them; ten Pair of which take their rise from the *Medulla Oblongata*; and thirty from the *Medulla Spinalis*, which thirty make their egress by sixty Perforations in the Spaces between the *Vertebræ*; and though all have their exquisite Sense communicated to them from the Brain, yet the Substance of the Brain itself is *wholly insensible*, which is very amazing?

Q. *What is the Cerebellum?*

A. It

A. It is a marrowy windy Body, that lies under the Brain, in the lower and hinder-part of the Head ; its lower part is continuous with the Brain, but the upper is sever'd from it by the Folds of the *Dura Mater*.

Q. How many Muscles are there in the whole Body?

A. They are in number four hundred and thirty four ; thus, (*viz.*) in the Forehead two, in the Occiput two, the Eye-lids six, the Eyes twelve, the Nose seven, the external Ears eight, the internal Ears four, the Lips thirteen, the Tongue eight, the Uvula four, the Larynx fourteen, the Pharynx seven, the Os Hyoides ten, the lower Jaw twelve, the Head fourteen, the Neck eight, the Shoulder-Blades eight, the Arms or Shoulder-Bones eighteen, the Ulna twelve, the Radii eight, the Wrists twelve, the Fingers forty-eight, Respiration fifty-seven, the Loins six, the Abdomen ten, the Testicles two, the Bladder one, the Yard four, the Anus three, the Thighs thirty, the Legs twenty-two, the Feet eighteen, the Toes forty-four.

Q. What is the Abdomen ?

A. It is all that Cavity which extends from the Diaphragma to the Os Pubis.

Q. What are the five Pair of Muscles of the Abdomen called ?

A. (1.) *Oblique Descendens.* (2.) *Oblique Ascendens.* (3.) *Rectum.* (4.) *Pyramidalis.* (5.) *Transversalis.*

Q. What is the Linea Alba ?

A. It is a concourse of all the *Aponeuroses* of the Muscles of the Abdomen. It extends from the *Cartilago ensiformis* or *Xiphoides*, to the Os Pubis.

Q. What are the Number and Names of the Intestines or Guts ?

A. They consist of three Coats, and are about seven times the length of the Person ; they are in Anatomy divided into six, (*viz.*) three small, and three great ones ; the small are the *Duodenum*, *Jejunum*, and *Ilium* ; the great ones are the *Cæcum*, *Colon*, and *Rectum*.

Q. What is the Epigastrick Region ?

A. It is the superior part of the *Abdomen* ; it begins at the *Cartilago Ensisformis*, and ends two Fingers breadth above the Navel ; its middle part is called *Epigastrium*, which incloses the small Lobe of the Liver, part of the Stomach, with its inferior Orifice, and the middle part of the *Colon*.

Q. What are the Hypochondria ?

A. The two sides of the *Epigastrick Region*, are called the right and left Hypochondrium ; the right contains the great Lobe of the Liver and Gall-bladder, and the left contains the greatest part of the Stomach and Spleen.

Q. Which is the Umbilical Region ?

A. It begins two Fingers breadth above the Navel, and ends two Fingers breadth below it ; its middle part is called the Navel, and its two sides the *Loins* ; the Navel includes the greatest part of the *Jejunum* and *Mesentery* ; the right Loin contains the right Kidney, the *Cæcum*, part of the *Jejunum* and *Colon*, and the left Loin the left Kidney, and some part of the *Colon* and *Jejunum*.

Q. Which is the Hypogastrick Region ?

A. It is called *Hypogastrium* ; its Sides are the *Ilia* or Flanks ; under it we find the *Rectum*, Bladder, and Matrix : the *Ilia* are so called, because they contain the Gut *Ileum* ; the *Hypogastrium* is divided into the *Pubis* and Groins.

Q. What

Q. What are the Venæ Lactææ ?

A. They are slender pellucid Vessels, having but one Coat, sent in vast Numbers thro' the *Mesentery*; their Use is to carry the *Chyle* from the small Guts to the vesicular Glands of the *Mesentery*, and so to the *Receptaculum Chyli*: they are of two sorts, and called *primi & secundi generis*.

Q. What is the Mesentery ?

A. It is a membranous Part, which ties most of the Guts together, and keeps them from tangling; it has two proper, and one common Membrane; it contains Veins, Arteries, Nerves, *Lymphaducts*, Glands, and *Venæ Lactææ*.

Q. What is the Lympha ?

A. It is a fermentitious Liquor, separated from the serous Part of the Blood in the conglobate Gland, impregnated with volatile Salt, and sulphureous Particles; which, when brought to the *Vasa Chylifera*, makes the *Chyle* thinner, and apt to dilate easily in the Heart; and the same it does by the venous Blood in the Veins, if it is too thick. It differs from a *Serum*; for if set in a Spoon in the cool, it will turn to a Jelly. The *Lymphaducts* are Vessels long, hollow, small, and knotty, having many Valves, which suffer the *Lympha* to pass to the *Chyliferous* Vessels, (and some Veins) but hinder its return.

Q. What is the Larynx ?

A. It is the Head of the Windpipe.

Q. What is the Pharynx ?

A. Only the Orifice of the *Oesophagus*, dilated to a great Extent.

Q. What is the Epiglottis ?

A. It is the fifth Cartilage of the *Larynx*, and serves, like a Trap-Door, to keep any thing from falling into it.

Q. What are the Spinalis Medulla, and Spinalis Oblongata?

A. The Spinalis Medulla, or Spinal Marrow, is only a Production and Continuation of the Brain; 'tis divided into two parts, one of which is lodged in the Brain, and is called Medulla Oblongata, and the other contained in the Vertebrae, which is properly called Medulla Spinalis. The Medulla Oblongata is of a Substance harder than the Brain; and the Medulla Spinalis more solid than that; being a Rope of Nervous Fibres, distributed to all the Parts of the Body, and gives them exquisite Sense and Motion; it has three Coats, one of which proceeds from the Dura, and the other from the Pia Mater.

Q. Why has the Heart a Pulsation, and why is the Blood red?

A. No (satisfactory) Reason, that we know of, can be given for either of them, but the Will of the great Creator. Not but Attempts have been made by Men of ready Inventions; which may be seen in a Treatise of ours, lately published, called, Mechanical Essays, explicating the Animal Oeconomy, &c. a Book of great Use to all young Practitioners. Printed for C. Hitch, at the Red-Lion in Paternoster-Row, London.

Q. How is the Body nourished?

A. By Blood; which Blood is thus made: The Food after being chew'd in the Mouth, and mixed with the Saliva or Spittle, passes through the Oesophagus or Gullet, into the Stomach; the inner Coats of both which, being full of small Glands, are continually supplying the Stomach with an Acid, which meeting with the pounded Food, makes a sort of ferment, and makes it become more liquid, and perfectly uniform; which being equally on all sides squeezed by the Stomach,
passes

passes through the *Pylorus* into the Intestines; where (in the *Jejunum* and *Duodenum*) it mixes with the *Bile* and *Pancreatic Juice*, by means of the *Ductus Cholidochus* and *Ductus Pancreaticus*, which open into them for the same purpose; these here meeting with the *Aliment*, perfect the Liquefaction, and then it makes its way thro' the other Intestines, where the grosser Part is evacuated by Stool, and the most refined Part, called *Chyle*, enters the Orifices of the first *Venæ Lactææ*, which are more numerous in the *Jejunum*, than in any other Intestine, and spread themselves all over the *Mesentery*, in whose *Basis* there are Glands, in which these Veins terminate; and the *Chyle* is received by the second sort of the *Venæ Lactææ*, and conveyed to the *Receptaculum Chyli*, from whence it rises thro' the *Ductus Thoracicus* to the left *Subclavian Vein*, and so glides on to the descending Branch of the *Vena Cava*; after that to the right *Auricle*, and then to the right *Ventricle* of the Heart. Then by its *Systole* or Contraction, it is forced thence into the Lungs, and then descends into the left *Auricle* of the Heart; whence it is expelled into the *Aorta*, or great Artery, and so passes along with the Blood, by the Arteries, through the whole Body, and returns again with it by the Veins to the Heart, and undergoes many Circulations before it is turned into Blood; but by the *vital Spirits* and other *active Principles* of the Blood, it receives *some Alteration* every time it circulates; till at length all its Mass (that is capable of being turned into Blood) is *sanguified*; and what is *not*, is discharged by Urine, Stool, Sweat, &c. The Blood being thus made, the Body is nourished by it; for there is that diversity of figure, both in the Particles of the Blood, and Pores of each Part, that in the Circulation every Particle sticks

in its proper *Pore*, in order to pass into the Nourishment of *that Part*, which is of the same Nature with its self; (*viz.*) the Salt and *sulphureous* Particles equally mix'd, go to nourish the fleshy or musculous Parts; the Oily and *Sulphureous* to the Fat; the Salt and *Tartareous* to the Bones, &c.

Q. How much Blood is supposed to be in the whole Body?

A. According to some Authors, fifteen or twenty, and to others, about twenty-four Pounds; which circulates six or seven times in an Hour.

Q. Why is the Arterial Blood more florid than the Venal?

A. That Colour is merely owing to the mixture of the Particles of the Air with the Blood in the Lungs; and even the Venal Blood a while exposed to the Air, acquires (contrary to its Nature) a florid Colour also, most commonly.

Q. What is Saliva or Spittle?

A. It is made of the Blood which passes thro' the *Parotid Glands*, placed behind the Ears, and the *Maxillary Glands*, seated under the lower *Maxilla*, between the *Larynx* and the *Os Hyoides*, and is pressed out thence into the *Ductus Salivares*, which open into the Mouth, under the Tip of the Tongue, upon the two sides of the *Frænum*, by the lower Fore-Teeth. These *Ductus's* are four in number.

Q. How much Choler is supposed to be in the Body?

A. About two Pounds; but it is very uncertain.

Q. How does it cause the Jaundice?

A. Either when thro' the want of a *convenient Ferment*, it is not separated from the Blood; or when the Neck of the *Vesica Fellis* is stopped, that
none

none can pass out of it into the Intestines. But the Reader may find greater Satisfaction in my *Mechanical Essays on the Animal Oeconomy.*

Q. What is Hunger and Thirst?

A. Hunger is caused by an *Acid*, which continually trickles down the Cavity of the Stomach from its own Glands, and those of the *Oesophagus*, which when the Stomach is empty, it finds nothing to prey upon, therefore pricks upon the Membranes of the Stomach, and so causes a Desire of Food; and when there rises up some Vapour, which heats its superior Orifice, it inclines us to cool it with something; and this is what is called *Thirst*.

Q. How is Milk produced?

A. Milk consists of a middle Nature between Blood and *Chyle*; being not so thick as the one, nor so *serous* as the other, and is thus made: When the *Chyle* has mixed with the Blood (as has been said) and is got as far as the *Aorta*, that Part of it which is most *serous*, is convey'd by the *emulgent Artery*, and strained into the Kidneys, by the papillary Bodies, to be sent from thence, by the *Ureters* to the Bladder, and so voided by *Urine*, whilst that Part that is most *milky*, is carried by the small Branches of the *Mammariæ*, to all the Glands of the Breast, into which the Secretion of it is made; where all its Particles being united, make up a *Body of Milk*, which is thrown by the Pipes of these Glands into the *common Cistern*, where it remains till the Child (by the *Tubuli* which run from the Cistern to the Nipple) draws it out. Vide *Mechanical Essays*, &c.

Q. What is Smelling, and how is it performed?

A. It is a *passive Quality* of the *Olfactory Nerves*, in receiving the Impression that *Odorous Bodies* make, by virtue of their Exhalations; thus,
viz.

viz. the little Atoms that exhale from *Odoriferous Bodies*, being carried by the Air to the Nose, strike upon its inner Membrane, and shake the small Pipes of the *Olfactory Nerves*; upon which the subtle Matter with which they are filled, partaking of the same Motion, flies immediately to the *Corpora Striata*, where these Nerves take their rise, and where the Soul perceives that this is an Impression of an odoriferous Body. And this is what is called *Smelling*.

Q. What is the Difference between Conglobate and Conglomerate Glands?

A. Conglobate Glands are they which are undivided, being of one Substance and Composition, appear firm, and have an even smooth Surface. *Conglomerate Glands* are composed of several little Bodies, joined under one Membrane, such as the *Pancreas*, *Salival Glands*, *Lachrymal Glands*, &c.

Q. What is the Os Hyoides?

A. It is seated at the Root of the Tongue, under the lower Jaw, and above the *Larynx*, and is shaped like the Greek Letter χ , whence it is called *Ypsiloides*; by its Gibbous Side it is joined to the Basis of the Tongue, and into its *Concave*, it receives the *Epiglottis*.

Q. What is its Use?

A. It serves for the Insertion of those Muscles that move the Tongue, and for keeping the Throat open till we swallow, and to keep open the Windpipe till we breathe and speak.

Q. What is the Os Pubis?

A. This is what is called the *Share-Bone*, and is the third of the *Ossa Innominata*, of which it is the lower, and inner, or fore-part.

Q. What are the Ossa Innominata?

A. The

A. The *Os Ilium*, *Coxendix*, and *Pubis*, joined to the *Os Sacrum* (through the Intervention of a Cartilage) by a strong Ligament, which together frame the *Pelvis*, or Cavity, which contains the Bladder, Matrix, and part of the Intestines.

Q. *What is Hearing?*

A. It is a Sense, whereby Sound is perceived from a trembling Motion of the external Air, beating upon the *Tympanum*, and so moving the internal Air with the Fibres of the Auditory Nerve, and communicated to the Brain.

Q. *What is the Tympanum?*

A. It is what is called the Drum of the Ear; and is a nervous, round, *pellucid* Membrane, of most exquisite Sense, separating the outward from the inward Ear; and springs (according to *some*) from the *Pericranium*; to *others*, from the *Pia Mater*; to *others*, from the *Dura Mater*; and to *others*, from the softer Process of the Auditory Nerve expanded. When it is taken away, a Cavity appears on the inside of it; in which are contained four little Bones that are moveable, and very much conduce to Hearing; *viz.* (1.) *Malleolus*, or the little Hammer. (2.) *Incus*, the Anvil. (3.) *Stapes*, the Stirrup. And, (4.) *Os Orbiculare*, so called from its round Shape. If by any Accident, the *Tympanum* is lacerated, the Hearing of that Ear is irrecoverably lost; therefore let the young Surgeon be cautious *how*, or with *what*, he syringes an Ear; and be sure to use an Ear-Syringe, and not one with a long Pipe, nor do it too *forcibly*, lest he come off with just Shame and Scandal, and do such Mischief as he can never make Satisfaction for. As to what he ought to syringe an Ear with, in Deafness, &c.

warm

warm Water, in which is a Quantity of Canary, *Aq. Hungar.* or good Brandy, may serve as well as any thing.

Q. What is Vision or Sight?

A. It is that Sense whereby, from the different Motion of different Rays, gathered in the *ChrySTALLINE* and *Vitreous* Humour, and striking upon the *Tunica Retina*, visible Objects are perceived.

Q. How many Humours is the Eye composed of?

A. Three, (*viz.*) Aqueous, ChrySTALLINous, and Vitreous.

Q. How are they situated?

A. The Aqueous is outermost, and fills up that Space which is between the *Cornea* and ChrySTALLINE Humour before: If any thick Particles swim in it, then Flies, &c. seem to be flying before the Eyes; and if they yet grow thicker, so as to cause a Film, and this be spread before the Hole of the *Pupilla*, it makes that Disease called a Cataract. The CrySTALLINE Humour is placed between the *Aqueous* and *Vitreous*, not exactly in the middle of the Eye, but inclining rather *towards* its forepart; it is more bright and solid than either of the other two. The *Vitreous*, so called from its likeness to melted Glass, is thicker than the *Aqueous*, and thinner than the *CrySTALLINE*, and exceeds both in Quantity.

Q. How doth Blood pass out of the Arteries into the Veins?

A. Either by *Anastomosis*, or *Inosculation*, (which is now, with Reason, not believed;) or else by the Capillary Arteries letting out their Blood into the Pores of the Substance of the Parts, on whose Nourishment part is spent, and the rest imbibed by the Mouths of the Capillary Veins; and

and this is now the common received Opinion.

Q. Which is the Vena Saphæna?

A. When the Iliacal Branches of the *Cava* are descended as far as the Thigh, they are called *Crurales*; and when past the Groins, are divided into six more, the first of which is the *Saphæna*, and which descends down the inside the Thigh and Leg, between the Skin and *Membrana Carnosa*, and generally appears turgid, on the inside the Ankle, where it is opened with safety and success, in Diseases of the Matrix.

Q. What is an Hair?

A. It is a small Body, Thread-like, hard and flexible.

Q. Of what Figure are they?

A. Generally four-square, sometimes triangular, seldom round, but always porous lengthways.

Q. What are Nails on the Fingers and Toes?

A. They are a horny transparent Substance, coming nearest to Bones, and are given for Defence, but are without Sense; and both they, and the Hair, will grow after a Man is dead.

Q. Of what Weight and Bigness is the Brain of a Man?

A. Some Men's weigh our or five Pounds, and are by some affirm'd to be as big again as that of an Ox.

Q. And what is your Design in publishing this Book the fifth Time?

A. The very same as it it was the first, second, third, and fourth; (which have given such Satisfaction to the World, that they are all sold off;) and that was, To serve my Generation; and to deliver

deliver that in a few Words, and pleasant Method, that others have made mysterious Volumes of,* to torture the young Reader's Pocket, and Memory to little Purpose.

——— *Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.* Horat.





A N

A P P E N D I X :

C O N T A I N I N G

A Rational (tho' short) Account
of the VENEREAL DISEASE in
every Stage of it.

With the True Method of Cure, and
Management of a Patient under it.

Q. *T*HE Venereal Disease being so common,
and there being such a multitude of Preten-
ders to its Cure, and so many miscarrying
under their Hands, I beg you will favour me with your
Thoughts about it.

A. With all my heart ; ask what Questions you
please, only use Brevity.

Q. Whence had it its Original ?

A. Some say from France, and from thence call
it *Morbus Gallicus* ; others from Naples : but it is
of no great moment to know from whence it came,
it is sufficient for us that we know it is now in
our own Country ; nor will we contend about
Words, and wrangle, whether the first Stage of
it, attended with a Gleet, should be called *Gonor-
rhœa*, or *Stillicidium*, or whether a Discharge at
the

the Salival Glands, by the use of Mercury, be most proper to be called a *Salivation*, or a *Ptyalism*; but discourse only of what is more material.

Q. How many ways may a Person be infected with the Grand Pox.

A. (1.) By impure Embraces, (2.) by a lascivious Contact of the Genitals, (3.) from pocky Parents, (4.) by sucking an infected Nurse, (5.) by suckling an infected Infant, and (6.) it is not adviseable to lie in Bed with a pocky Person, especially for young and tender Bodies; but as to sitting on the same Seat, putting on the same Glove, or wiping on the same Towel, there is no danger in any of them, and they are only sham Pretences for some wicked Persons to impose on their credulous Relations by.

Q. What is the Nature of its Poison, and how is it to be accounted for?

A. It would take up too much room to give you the Opinions of all that have wrote about it, and who, as they all differ one from another, cannot be all in the right, but may possibly be all in the wrong; and it being only a matter of Speculation, I shall not spend time here about it, but refer you to my *Mechanical Essays on the Animal Oeconomy*, a Book worth your buying.

Q. How do you distinguish, of this Disease?

A. The first Infection is commonly called a *Gonorrhœa* or simple running at the *Penis*, and the second Infection is by way of Eminence named the *POX*; either proceeding at once from the impure Embraces of a pocky Person, or from a *Gonorrhœa* ill cured.

Q. What is a CORDEE?

A. It is a Constriction of the *Frænum*, whereby the *Penis* is pulled down (in the nature of a *Curve*) when it is erected, causing exceeding Pain; and it commonly

commonly happens when the Patient awakes out of his Sleep.

Q. How is it to be cured?

A. Some advise to dip the *Penis* in cold Milk, or Water; whilst others say that such a Method is apt to shut the Pores, and pen up the Poison, and rather advise to dip Cloths in Oxycrate, and wrap them about the *Scrotum*: but the most effectual way is to give brisk Purges with Mercurials, and now and then a Dose of *Turbith Mineral* to make Revulsion, and at proper times, Emulsions *cum Sale Prunel. Camphor. &c.*

Q. What is a Phimosis, and Paraphimosis?

A. The one is a *Constriction* of the Prepuce over the end of the *Glans*, so that it cannot be drawn back; and the other is a painful *Restriction* of it when it is drawn back behind the Neck of the *Glans*, so that it cannot be again brought over its end, to cover it.

Q. How must I remedy this Mischief?

A. Foment it with a Decoction *ex Fol. Malv. Verbas. Summit. Centaur. Hyperic. Sem. Lini, Flor. Cham. Flor. Melilot. Sambuc. &c.* and if need be, thicken up some of the Ingredients with *Farin. Fabar.* into a Cataplasm, and apply it warm, and purge with *Pil. ex Duobus* and *Calomel.* and between whiles make Revulsion with *Turbith Mineral, &c.*

Q. What must be done in a Dysuria, or Heat, Pain, and Difficulty of Urine?

A. On the Days the Patient does not purge, give him plentifully of Emulsions, *ex quatuor Sem. Frigid. maj. cum Sem. Papaver. Syr. Altheæ, &c.* and with a Draught of it at Night (on the purging Days) *Syr. e Meconio* $\bar{3}j.$ or $3vj.$ and instead of making the Emulsion of *Aq. Font.* make it of *Aq. Hordei,* in $\bar{f}ij.$ of which dissolve $3vj.$ of Gum Arabic. And if this does not do, mix with each Dose.

Dose, *Salis Prunel.* ʒss. and in some stubborn Cases, or in a *Cordee*, or *Priapism*, add *Sacc. Saturni*, or *Camphor.* gr. v. or vj. or if the Emulsion cannot be had, a strong *Decoct. Malvar.* will infallibly do it in three or four Days, drinking of it at least two or thij. a Day, as I know by forty Years happy Experience.

Q. *What is a Caruncle ?*

A. It is a little Excrecence of Flesh, growing in the *Urethra*, caused by the corroding Gleet, passing thro' it, and lodging there. In a Clap of long standing, or in one that is a consequent of several, *one upon another*, or from one ill cured. The Patient that has them, commonly pisseth in divers Streams, and sometimes only by Drops, as in a Strangury, and with prodigious Pain; and if the *Ductus* is wholly stoppt thereby, there must be speedy Relief, or Death is the Consequence, and that very quickly.

Q. *What must be done in this deplorable Case ?*

A. By a Catheter Probe, or rather by a Wax Candle, made small on purpose, and dipt in Oil, and passed gently into the *Urethra*, you may discover its Situation; but unless Life is in danger, you must not be too rough with it to force it thro' the *Caruncle*, but rather use a *medicated Candle*, to eat it off.

Q. *How is that to be done ?*

A. Having a Piece of a very small Wax Candle, of a fit length, scrape off the Wax at one end, and dip the same in a fit Mixture, to supply the place of the Wax scraped off. The Composition is to be either only very drying, or *Catheretick*; as *Pulv. Sabin. Alum. ust. Præcipit. Rub. Lap. Calaminar. Vitriol. Calcinat. Merc. Sublimat. &c.* mixt with a due proportion of *Empl. Diacalcit. de Cerus.* or *è Mucilagin.* which may be found in Authors,

thors, differently proportioned : but for a *Specimen*. take only this ; *R Merc. Præcip. rub. ʒij Lap. Gilaminar. ʒij. Vitriol. Calcinat. ʒj. Empl. Diacalcit. ʒifs. ad ignem liquefact. & fiat Cand. S. A.*

Pass the medicated End of the Candle, so far into the *Urethra*, as to press gently upon the Caruncle ; and being fixed close there, turn the other End back, over the End of the *Prepuce* and *Glans*, and secure it there from slipping : and let the Patient drink as little as possible, to avoid making Water ; for when he does, he must take out the Candle, and when he has done, put in another himself. Upon drawing forth the Candle, he may inject warm, a little *Aq. Hord. or Mucilag. à Sem. Cydonior.* to assuage the Heat and Pain. And let him follow this Method, until the Sloughs separate and come away ; and then to heal it, inject *Aq. Calcis, or Decoct. Cort. Granat. Balauft. &c. cum Syr. Ros. Sicc. warm.*

Q. What are Chankres, or (as they are commonly called) Shankers?

A. The are Venereal Ulcers (most commonly) on the Prepuce, and Glans.

Q. How are they to be cured ?

A. As to Externals, (if they are of a mild kind) Præcipit. Rub. strowed on them, a Digestive over that, and kept conveniently on, often do the Business ; as does sometimes Argent. Viv. kill'd (as it is called) with Tereb. Vin. and apply'd on Pledgets ; but if these fail, the Chankres may be touched with Lac Sublimat. and sometimes a light Touch of the Lunar Caustick ; but if nothing will do, fume them with Cinab. factit. ʒj. on an Iron Pad, three parts red-hot, twice a day, and purge well with Pil. ex Duob. gr. xxv. & Calomel. gr. xii. and for two or three times, (to cause Revulsion) and at two or three Days distance, Exhibir.

Turpi.

Turp. miner. gr. vii. or viii. in Conf. Ros. rub. and then purge again, as before, until the Malignity is subdued: But if there is only a simple Excoriation, *Unguent. Tutiaæ*, or *Cerat. ex Lap. Calaminar.* will sometimes heal it.

Q. How is a Bubo to be managed?

A. If there is only an Induration of the Glands, and the Infection recent, give mercurial Catharticks; but if it is large and painful, forbear purging, and hasten Suppuration, with *Empl. Diach. cum Gum.* or a Cataplasm *ex Rad. Lilior. alb. Altheæ, Allii, Bryon. Fim. Columbi, Pic. pinguid,* &c. And when Matter fluctuates, open it by Caustick, separate the Eschar, and apply Digestives, and then purge with Mercurials; and if it yet proves vexatious, give a Dose or two of *Turb. miner.* at due Intervals; and if still it will not yield, do not trifle, but proceed to Salivation.

Q. How is a Hernia Humoralis, or hard Venereal Tumor of the Scrotum to be cured?

A. Having prepared a fitting Bag-Truss, to support its weight, and big enough also to contain a Cataplasm, make one *ex Farin. Fabar. Flor. Sambuc. Chamæmel. Meliloti, in Aq. Font. or Oxymel. simpl.* to which add *Unguent. Sambuc.* Avoid all restraining Applications, and purge with *Pil. ex Duobus* and *Calomel.* But if notwithstanding it increaseth, and threatens an Abscess, have recourse to a few Doses of *Turbith*, at fit distances, to make Revulsion, and then purge as before; and if any hardness remain afterwards, apply *Empl. è Cicut. cum Ammoniaco, vel Diasulphuris, de ranis cum Merc. &c.*

Q. How is a Simple Gleet, with, or without, the foregoing Symptoms, to be carried off?

A. Not always by the very same Method, but as Symptoms, Constitution, Season, &c. indicate.

Q. Does

Q. Does not strong and frequent Purging often cure it, without any thing else?

A. I believe never, without Balsamicks; and altho' different Habits and different Degrees of Infection, may require different Catharticks, yet those of the violent sort, if too long used, and in weak Constitutions, are often so far from curing, that they will cause a return of Symptoms (if before abated) and tear the Constitution to pieces; especially, where there is a bilious Blood, and where *Colocynth*, and *Scamony*, have been the Purges.

Q. How then must I proceed?

A. In hot, dry, bilious, hectic Habits, cooling gentle Catharticks, such as *Elect. Lenitiv. Crem. Tart. pulv. Rhabarb. Jalapii, &c.* and Decoctions *ex Fol. Senæ, Tamarind. Sal. Tart. &c.* are best; but in cold flegmatick Habits, that common Purge, of *Pil. ex Duobus* with *Calomel*, is as good as any; notwithstanding the great Pretences some make to *Nostrums*, in curing this Disease; and all such Pretences are no better than *Quackery*, and hardly any regular Surgeon attempts it now-a-days, but vary their Medicines according to Circumstances.

Q. However, for the sake of young Beginners, I pray you to give some Formulæ?

A. To satisfy such, I will; and first, for

A P I L L.

R Pulv. Aloes, Jalapii, ana zij. Diagrid. Colocynth. Crem. Tart. ana 3fs. Tart. Vitriolat. gr. xij. Merc. dulcis zifs. cum Syr. è Spin. Cerv. & Bals. Capiivi, q. s. fiat massa, Dos. 3fs.

A N E L E C T U A R Y.

R Elect. Lenitiv. ʒiij. Bals. Capiivi, ʒfs. Calomel. Diagrid. Resin. Jalapii, ana ʒij. Crem. Tart. Salis

Salis Prunel. Milleped. præp. Antimon. Diaphoret. ana ʒss. Syr. Altheæ, q. s. ut fiat Elect. Dos. quant. Jugland. omni mane.

Another.

R Elect. Lenitiv. & Conf. Lujulæ, ana ʒiss. Pulv. Rhabarb. ʒij. Salis Prunel. ʒiij. Calmel. ʒiss. Pulv. Agaric. Ant. Diaphoret. ana ʒij. Resin. Jalap. ʒj. Bals. Capiivi, q. s. ut fiat. Elect. Dos. quant. N. M. omni mane & nocte.

Q. Are not Injections sometimes used with Success?

A. Yes, to abate the Pain and Heat in the Urethra, and to heal Excoriations there; they are generally made *ex Aq. Plantag. Troch. alb. Rhas.* and (when Ulcers are in the Urethra) sometimes we add *Mel. Rosar. Mel. Egyptiac.* or a few Grains of *Sacc. Saturni*, well mixed and used warm, always injecting it after making Water.

Q. Is not a yellow Gleet commonly accounted ill?

A. Generally it is; yet sometimes in an ill Habit, or bilious State, it may not.

Q. When the Malignity is carried off, and the Symptoms abated, how shall I finish the Cure?

A. Not with Restrictants; but when the Gleet is but little, white, tenacious, &c. mix *Conf. Lujulæ, vel Cynosbat. & Bals. Capiivi, ana ʒj. Pulv. Rhabarb. ʒij. Pulv. Jalap. ʒj. & capiat quant. N. M. mane & hora Somni.* This, and a regular Regimen, commonly concludes the Cure. But sometimes I also give the *Potio Alba Batean.* sometimes made with *Tereb. Ven.* and sometimes with *Bals. Capiivi.* But during the whole Cure, the Patient must abstain from all strong Liquors, and from all salt, four, and spicy Food, and from Venery.

Q. But suppose, that with all the Care and Caution that can be used, Symptoms do not abate; or if abated, they return, what must be done?

A. Give

A. Give an Emetick, *ex Turb. miner. gr. vii* or *viii.* and repeat it, at two or three Days distance, for two or three Doses, and then purge; and so do by turns, until Symptoms go off.

Q. I am told that some give Tinct. Cantharidum?

A. It is too dangerous for young Beginners to meddle with, and I advise you to let it alone.

Q. Is there any thing that will prevent an Infection, if an infected Person is carnally conversed with?

A. It is Pity there should be any such thing, and I believe there is not; and if I knew such a Secret, I would not discover it: the surest Way is to live honestly.

Q. Is not the Venereal Disease (either the first or second Infection) to be cured without Mercury?

A. I will not say, that the thing is impossible, but I should be loth to put it to the Venture; and if any are cured without it, it must be the first Stage, and that too of a mild Nature.

Q. Sometimes the Mercury runs thro' the Patient downwards, can it profit him in such a Case?

A. Dr. Quincy says, that it may be so fixed by giving Camphor with it, that it shall have no sensible Operation at all, only act as an Alterative; which I have, in some measure, experienced to be Fact; and the Reason why we commonly give Calomel over Night, and purge it off in the Morning, is not only to prevent its salivating, but, also, to fuse the Blood, break its Globules, dissolve the pocky Salts, open the obstructed Tubes, and so to prepare Matters, to be carried off by Catharticks; without which, Catharticks seldom do much good. And let me advise you not to undertake to cure any such Patient by the Lump; or, *no Cure no Money*: for these sort of Sinners are apt at all times (much more when so secured) to get Clap upon Clap, to whore on, and not own it,

it, to the tiring out your Patience, as well as to your great Vexation, and fruitless Expence of Pocket, and too often of Reputation too.

Q. Pray what are the Diagnostick Signs of a Pox, or second Infection, as it is called?

A. Seldom any Man has all of them, but every pocky Patient has some of them, viz. *Serpiginous Eruptions, Inguinal Tumors, and Abscesses, Ophthalmia's, Ozæna's, Ulcers of the Uvula and Tonsils, Nocturnal Pains on the Shoulders and Shins, Hemisrania's, Cephalæa's, Gummata, Tophs, Nodes, Exostoses of the Bones, Scabs with crusty tawny Tops, especially on the Head and Forehead; and the back part of the Fauces are ulcerated; cum multis aliis.*

Q. What are the Prognostick Signs?

A. If the Infection is recent, if the Patient is not Scorbutick, Rheumatick, Arthritick, Cacoehymick, or has not got Pox upon Pox, but is of a sound Habit, and will be govern'd and submit to Rules, we may hope for Success; but if the venereal Taint has an uncommon Virulency, is of an old Date, or that the Patient is a *Veterane* in Iniquity, has been accustomed to Mercury, is of an ill Habit, will whore on, live irregularly, and neglect Rules; be sparing of your Promises, and not fond of meddling with him at all.

Q. Do you think it impossible to raise a Salivation without Mercury?

A. It is more than probable, that it is *impossible*; but supposing it was *possible*, yet unless such a Medicine, as would as copiously raise a Salivation as Mercury, was as peculiarly adapted to encounter the venereal *Virus*, as that is, the glandular Secretion would signify little.

Q. Why are drying Diet-Drinks made of the Woods given?

A. After

A. After Salivation, they give a sort of *Elasticity* to the Blood, dry up Superfluities, warm, open obstructed Vessels, and restore the Tone of the over-relaxed Fibres, &c.

Q. Which of the Woods are most in Use?

A. The most in Use, are *Guaiacum*, *Sarsaparilla*, *Sassafras*, *China*, *Lign. Juniperi*, *Buxi*, *Ebon. Abietis*, *Santal. omn.* with *Rad. Bardan. Petasit. Fol. Persicar. Saponar.* &c.

Q. Which is accounted the best way to raise a Salivation?

A. If the Disease is not too deeply radicated, the best way (because the safest) is to raise it by *Calomel*, otherwise the way by *Unction* is more eligible.

Q. Some use *Arcan. Corallin. Merc. Vitæ*, green, red, and yellow *Precipitate*, *Panacea Mercur.* &c. your Opinion of them?

A. Let it be a standing Rule with you, ever to prefer the safest Medicines and Methods, and not to try Experiments, to the hazard of your Patient, in hopes to find a shorter Cut to the Cure.

Q. Suppose I was to raise a Salivation by *Calomel*, how ought I to proceed?

A. In every Method take time, do it leisurely, and by small Doses, rather than large, lest you raise a Devil that you cannot conjure down again; therefore (if by *Calomel*) give *gr. xv. or xvj.* in a Morning, and as much at Night, in *Cons. Ros. Rub. vel Diascord.* every Day; and in three or four Days, you will commonly see the Signs of a coming Salivation, *viz.* the insides of the Cheeks tumified, the *Fauces* inflamed, the Tongue white and foul, the Gums swelled, the Breath stinking; the Patient is at times sick at Stomach, and ejects a thin Phlegm, which (if moderate) is a good Sign; but if violent and continual, is bad, &c. When the inside of the Mouth is whealed, you may cer-

tainly infer, that Ulcers are at hand: and now you may desist a Day, or more, to wait the Progress of the Salivation; which if it rises kindly, desist; if not, give another Dose or two of the Calomel, and if need be, increase it.

Q. Suppose that in several Days taking the Calomel, the Spitting does not come on kindly, nor other Symptoms appear, what must be done?

A. In some Constitutions, with these small Doses, the Case will sometimes so happen; in that case, after the Patient has taken two or *ziiiij.* of the Calomel, (if you find he has Strength to bear it) exhibit *gr. vij.* of *Turpeth. Mineral*, drinking warm Posset-Drink, or Gruel, between the Retchings, but not too much, lest it turn downwards; and if one such Dose will not do, give another at due Distance, until you gain your Point.

Q. But does it not sometimes happen, that, contrary to all Expectation and Endeavours, the Salivation will not come on? What must be done in that Case?

A. In some Constitutions there is such a Disagreement between the Particles of the Mercury, and the *Lympha*, (whether from its Tenacity, or some Defect in the Salival Glands) it does sometimes happen as you object. In that case, do not hazard your Patient's Welfare, but forbear giving any more Mercury, and purge off what is already given, and have Recourse to your Diet-Drinks, alterative Electuaries, or Pills *ex Cerus. Antimonii, Gum. Guaiaci, &c.* sometimes sweating with *Antimon. Diaphoret. Bez. Min. Cinnab. Antimon. &c.* drinking warm Draughts of Diet-Drink in Bed: Thus by contempering the contaminated Juices, perspiring the noxious Particles, and drying up the superfluous Serum; the Cure (altho' longer) may often be effected without Spitting.

Q. If

Q. If the Salivation comes on kindly, how long is it to be continu'd?

A. If it be moderate, it is best to suffer it to work itself off; which sometimes it will do in one and twenty Days, sometimes in thirty, from its first beginning.

Q. How much is called a sufficient Quantity, to spit in four and twenty Hours?

A. That is ever to be regulated by Age, Strength, and Degree of Infection, viz. a Pint and half, a Quart, or three Pints, to four Pints, and sometimes more; but if it continues too long, purge it off, lest the Patient sinks under it.

Q. How does the Mercury operate, to cause a Salivation?

A. By fusing the Blood, thinning its tenacious Particles, opening the obstructed Tubes, and dissolving the Venereal Salts, and so fitting them for Discharge by the Salival Glands, and afterwards by Catharticks.

Q. How must the Body be prepared for a Salivation?

A. If the Patient be of a sanguine Habit, take away a little Blood; let him submit to some Abstinence, and purge gently once or twice, to prevent a Diarrhœa and Inflammation of the Parts; and in lean thin Habits they may first bathe in warm Water; and the latter End of the Spring, or Beginning of Autumn, are the most proper Seasons for it.

Q. How ought a Salivation by Uction to be raised?

A. It is ever good to be on the safe Side, and not to raise it too hastily: My Method is, to mix ʒj. of the Mercury with ʒiij. of the *Axungia* (after being well kill'd, as it is call'd, with *Tereb. Ven.*) and rub in an eighth part Night and Morning;

and either let the Patient do it himself, or cover your own Hands with a Bladder, and do it for him before a Fire, he being secured from the Cold with a Blanket; rubbing it in from his Ankles up his Legs, all along to the upper Part of his Thighs, which cover with Yarn Stockings, and Flannel Trouzers, and rub in the remainder of the said eighth Part (each time) on his Arms, and about his Elbows.

Q. I am informed, that some Surgeons use ℥vj. of the Mercury to ℔bj. or ℥xx. of the Axungia, and rub in ℥j. or ℥ij. twice a Day.

A. If you err, let it be on the right side; but if your Unguent is so strong of the Mercury, and that you anoint twice a Day, if after four times anointing, the Patient's Mouth begins to ulcerate, desist a Day or more; as you must also, if bloody Stools, or Gripes come on; but if nothing of these appear, proceed another Day or two, and then intermit a Day, and so go on with Caution, until the Spitting comes on, and then forbear. But if after rubbing in ℥iss. or ℥ij. of the Mercury, the Salivation does not rise, give a Dose of seven Grains of Turbith; but if a due Quantity of the Mercury has been first rubbed in, wait a Day or two: when after such waiting, it will sometimes come on unexpectedly, without taking any thing; and it is better to be too slow, than too rash or hasty, especially in salivating by Uction; and if there are Tophi or Nodes, be sure to rub the Mercury well in there.

Q. How is the Patient to be managed, during his Salivation?

A. Be sure always to encourage him to go on chearfully, give him sometimes a little red Wine mull'd with a third of Water; let his Diet be Parnada, Mace-Ale, Water-Gruel, small Chicken-Broth,

Broth, Milk-Pottage, small Sack-Whey, Posset-Drink, and sometimes small Beer with a Toast; but if Gripes or Looseness attend, let his Drink be only the *Decoctum Album*, made *ex C. C. C. &c.*

Q. How is he to be cloathed, or secured from Cold, in the Salivation?

A. He should have woollen Stockings, Flannel Trouzers, Shirt, Cap, and Muffler; which should be changed for others, when you want to purge off the *Ptyalism*.

Q. With what is that most proper to be done?

A. Practitioners differ in this Point; but as good as any are the *Infus. Senæ, cum Syr. è Spin. Cerv. Manna, Syr. Ros. solutiv. &c.*

Q. How is the Patient at such time to be dieted?

A. You may permit him to eat moderately of Chicken, Veal, Rabbit, or Mutton well roasted, without Sauce, or Gravy.

Q. Must not the Patient then be sweated?

A. Yes, either in Bed, with *Ther. Ven. 3j. Cinab. Antimon. ʒj. Bez. Miner. gr. x.* drinking after it a Draught of warm Diet-Drink; or else (sitting on a Stool naked, encompassed with a Folding-Cradle, covered with a Blanket, and only his Head out, and that well covered) with *Spir. Vini rect.* burning on each side of him; doing so every Day for an Hour or two, if Strength will permit, giving him warm Napkins to rub himself with during his Sweating, and mull'd Wine to support his Spirits; and do thus for three Weeks or more, putting him every time (after it) into Bed, between Blankets, to sweat there also.

Q. To what End or Purpose will you do this?

A. That the remaining morbidick Serosities may be dried up before the Blood is filled with

new nutritious Juices ; therefore, during this Course, it will be proper to keep to a spare Diet ; and for Supper, particularly, to eat only a Biscuit, and a few Raisins of the Sun, or such like.

Q. Suppose that, in the Time of his Salivation, a Diarrhœa, Dysentery, or cruel Gripings attend ?

A. Every two or three Hours give a few Spoonfuls of some refreshing Cordial, made of *Aq. Cinam. fort. & tenuis, Aq. Mirab. Menthæ comp. Syr. Cydonior. Diacod. &c.* first giving a Morfel of an Electuary, made of *Cons. Ros. rub. Diascord. Pulv. Coral. rub. Ter. Japon. &c.* made up with *Syr. à Mecon.* and let his Drink be the *Decoct. Alb.* and exhibit Glisters of the same, *ad fßs. cum Elect. Diascord. Ther. Ven. Vin. Canar. Vitel. Ovi, &c.* according to your Discretion ; and give some of his Cordial after every Stool, and at proper Intervals, a Draught of mull'd Wine ; to which sometimes add a few Drops of *Laud. Liquid. Cydoniat.* but be as sparing of that as you can, because it checks the glandular Secretion.

Q. What is the Consequence of a Diarrhœa in this Case ?

A. The Humours thereby are carried downwards, and the salivating hinder'd.

Q. Suppose Sickness and Vomiting attend ?

A. If it be but gentle, let the Patient drink plentifully of Chicken-Broth, or Posset-Drink, and give now and then mull'd Wine, in which is boiled *Fol. Menthæ, Cort. Lymon. Caryoph. contus. &c.* But if the Vomiting and Pains are violent, attended with Fainting, cold Sweats, &c. the Danger is great. Now if he is costive, give a Glisther *cum Sacc. rub. Ol. Olivæ. Sal. Gem. &c.* and give good Cordials, and Sack mull'd with Spices, and especially when his Glisther comes away ; also

wring

wring Flannel Cloths out of red Wine, boil'd with Aromatics, and apply'd warm, *Scorbiculo Cordis*, and then anoint with *Ol. N. M. per Express. cum Ol. Absinthii*, and renew the Flannels as they dry ; but these Accidents are generally owing to the too hasty raising the Salivation, by giving too large Doses of the Mercury ; therefore be careful to guard against such Practice.

Q. What must be done to help their sore Chaps ?

A. Let him often hold in his Mouth warm *Aq. Hordei*, Milk, or Chicken-Broth ; but use no Astringent, or digestive Gargarisms.

Q. Why so ?

A. Because the one dries the Ulcer too much, and so stops the Spitting ; and the other brings off the Sloughs, and heals the Ulcers too soon. But if the *Acrid Salts* have eaten deep into the Parts, and so endanger loss of Substance, or a foul Bone, then promote the Digestion of the Ulcers, and destroy the rotten Flesh.

Do the first with *Decoct. Hordei, cum Fol. Plantag. Equiseti, &c. cum pauculo Tinct. Myrrhæ, & Mel Rosar.* and do the second, by touching the Parts often with an armed Probe, with this, *viz. Mel Rosar. ʒj. Spir. Vitr. gutt. xx. Ms.* or with *Mel. Rosar. Tinct. Myrrhæ, & Mel. Ægyptiac.* and keep the Jaws asunder, by Rolls of soft Rags put between the backward Teeth, or else sometimes you will meet with great Vexation, to keep open the Jaws.

Q. Suppose the Patient is over-costive ?

A. This seldom occurs, so as to hinder the Progress of the Salivation ; but when it does, exhibit a Glister, *ex Lacte, & Sacc. Rub. & Ol. Olivæ.* and allow him greater Quantities of diluting Liquors.

Q. Suppose a Tenesmus?

A. Inject a Glister ex Decoct. Alb. & Elect. Fracastor. & Ther. Ven. ana ʒiij. Vitel. Ovi, N° 1. Vin. Canar. ʒiij. and repeat it as Occasion requires.

Q. What is the Consequence of a too hasty rising, or a too long Continuance of a Salivation?

A. By the first, the Patient may be suffocated; and by the last, render'd consumptive.

Q. How must I prevent Suffocation?

A. By Derivation and Revulsion: give sharp Glisters with Hiera Picra, Sal. Gem. Colocynth. &c. and give some Cathartick, if the Patient can swallow; also cup, and scarrify on the Shoulders, and blister behind the Neck, behind the Ears, and down each side the Neck; and syringe the Throat with the Decoct. pro Syr. Altheæ, cum Syr. è quinque Radic. vel Limon. or the Decoct. Peet. acidulated with Spir. Sulph. And if his Lungs are stuff'd, add to the Decoct. Peet. Oxymel. Scillit. in due Proportions, at proper Intervals.

Q. How must a Consumption be prevented, when threatened by too long Spitting?

A. By gentle Catharticks, and Diureticks, with Sal. Tart. and to restrain any farther Colliquation, give Flor. Sulphuris ad ʒss. vel ʒij. or Lac Sulphuris, to ʒj. in some proper Conserve, two or three times a Day, and Morning and Evening some restraining Electuary, or a small Aq. Calcis, and change his Sheets and Flannels, for others well dried. And if the Salivation is over, and the Patient hectic, put him into a Course of Asses Milk, and the Testacea.

Q. Suppose there is an Ozæna, or Ulcer in the Nostrils?

A. That

A. That Ulcer, and those of the Mouth, *Tonsils*, *Uvula*, (and Shankers on the *Penis* too) are best check'd by a Fumigation, after this manner, *viz.* Gather the top of a Blanket all together, and tie it with a String, the other end of which String fasten to the Ceiling; (if for an *Ozæna*, Ulcers in the Mouth, &c.) then place the Patient upon a Chair, under the Blanket, so as it may inclose him; then set an earthen Dish or Pan on his Knees, in which put a Brick, and upon that an Iron Heater, made near red-hot, on which put *Cinnabar. factit.* ʒss. ʒij. or ʒj. in fine Powder; then bring the Blanket close round the Patient, and hold his Nose (or Mouth open) over the Fume, now and then giving him Air, and stirring the *Cinnabar* with the end of a Tobaccò Pipe, to make it smoke afresh; and after six or eight Minutes release him: and do thus once a Day at least (if not twice) for a Week or ten Days.

Q. But suppose that the Ulcers are very foul, or that the Parts are in Danger of being lost?

A. Then, at convenient Distances of Time, dip an armed Probe in, and touch them, with this, *viz.* *R. Mel. Rosar.* ʒj. *Tinct. Myrrh. Mel. Ægyptiac. ana* ʒj. *Ms.* or carefully touch the Parts with *Lac. Sublimat.* and proceed to Salivation by Uction, if the Case requires it.

Q. But will not Fumigation sometimes salivate?

A. In some Constitutions it will; but you may carry it off by Purging, and forbearing to fumigate.

Q. Suppose there are Serpiginous, or other cutaneous Eruptions?

A. Touch them carefully with *Lac. Sublimat.* or *Præcip. Alb.* mixed with *Unguent. Alb.*

Q. Suppose Gummata, Tophs, or Nodes ?

*A. Apply such a Plaister as this, viz. R Cin-
nab. Fact. ʒss. ad ʒj. Cera flav. ʒiiij. Ol. Ro-
sar. ʒj. Colliq. ut bene misceantur, & fiat Empl.*
and proceed to Salivation, without attempting to
open the *Toph* or Induration ; which (if the Bone
is not foul) will, in the Course of the Salivation,
disappear. However, some great Surgeons may
practise the contrary ; but for what Ends, is but
too evident.

And lastly, take care, in the Course of Sali-
vating, that your Patient does not swallow the
Saliva, or Lympha, thereby swallowing his own
Poison ; therefore, before he eats or drinks (du-
ring his Salivation) every time let him wash, or
gargle his Mouth well.

*Q. I had forgot one Case, that may happen, and
should have been named before, viz. Suppose a Patient
has a Phimosis and many Shankers, or large Warts,
sprouting out of the Glans and its Neck, which can
no way be come at, by reason of the close Constriction
of the Præpuce over the Ends of the Glans ?*

*A. That is really an ugly Case ; and I know
that Surgeons generally divide the Prepuce with
their Probe-Scissars, to come at these Warts, Shan-
kers, &c. But I do not like that Method ; for
they often adhere both to the Prepuce and Glans,
and then such Division is fruitless : and before you
can destroy these Appearances, the Wound in the
Prepuce will heal, and that Part be exceedingly
deformed, and troublesome ever after.*

Q. What other Method can be taken ?

*A. The Way I take, (tho' I have no Precedent
for it) and which I am sure, by happy Experience,
is the best, is this : Put up with the End of your
Probe, Lint all round, between the Prepuce and
Glans,*

Glans, (to prevent the *Glans* being hurt by the Caustick) then apply a mild Caustick, made of *Calc. Viv. & Lixiv. Capital.* (as is directed in this Book) all round the *Prepuce*, secured handsomely on, which in an Hour, or little more, will make its way thro' the *Prepuce*, which you may then divide, without any Pain, and it will drop off from the *Glans*, and leave it quite bare; so that you may see what you do, in extirpating those *Verrucae*, by Instrument, or *Lunar Caustick*, as you see most proper: *Circumcision* being more desirable, than a deformed and troublesome *Prepuce*, and ten times more convenient for the Cure of your Patient.

Q. I forgot, until now, to name it, (but it is a necessary Enquiry;) sometimes during a Salivation, a Hemorrhage of the Mouth happens; pray how must it be restrained?

A. If it be from a Tooth lately drawn, a small actual Caustery apply'd, is the most secure Way; If it proceeds from the Separation of the Sloughs, (and not too violent) *Oxyerate* held in the Mouth may be sufficient; or if not, a thick Dorsel, or small Button of Lint apply'd, being first cover'd with powder'd Vitriol, or (sometimes) Allom, to the bleeding Part, and held firmly on; and sometimes a restraining Gargarism, acidulated with *Spir. Vitr. &c.* may be sufficient.

Q. Suppose Infants, or Women with Child infected; how must we proceed with them?

A. These require great Care and Caution; and altho' pregnant Women have undergone a Salivation, without any Harm, and Authors tell us of Infants safely salivated; yet I think (until the Woman is deliver'd) a palliative Cure is safest. And as to Infants, Salivation is a dangerous Experiment; but rather, let all their Food and Drink

be

be medicated with *Sarfa* and *China*, and (according to Age) give them *Calomel* over Night, and purge it off in the Morning with *Syr. Rhabarb. vel Rosar. Sol.* every three or four Days, and sometimes *Aethiops Min.* given Night and Morning. And these Hints, to a Mind and Understanding not stupid, but capable of Improvement, are sufficient; and to those that are not, as much more Instruction would signify little.

Q. You mention very often the Use of *Lac Sublimati*; I desire to know its Preparation?

A. It is easily made: Take only *Merc. Sublimat.* ʒiij. in Powder, put it into a Pewter Bason, and put to it *Aq. Font.* ʒvj. and stir it about until it becomes white, then put it into a Phial for Use.

Q. I have been assured, that some have been cured of a simple Clap, by only taking a few Drops of a certain Liquor daily for a Week or ten Days: Is such a Thing possible? or if it is, pray what is the Secret?

A. I believe it has by Chance been done, in some strong Constitutions; but it is a dangerous Experiment, being apt to cause great Sickness at Stomach; sometimes it vomits violently, sometimes it works the other way, and sometimes both ways, and often salivates, if not timely purged off; the Preparation is this:

R Merc. Sublimat. ʒj. *S. V. rect.* ʒj. *fiat Solutio.* *Dof. gutt.* x. *xij. vel. xv.* in Posset-Drink, or Water-Gruel, every Morning, increasing the Dose in strong Bodies, *ad gutt.* xx. and some give it twice a Day; but I advise you not to meddle with it at any rate. But you will hardly fail of a Cure, in any Case, if you follow the safe Directions I have before laid down, without trying dangerous Experiments, to make short Cures, especially where the Patient has the Phial to take the Drops himself; who being in haste to be well, and
not

not knowing the danger of an *Over-Dose*, may take so many Drops as may ruin him ; and you may depend upon't, that he will not own it, but it is *you* that must bear all the *Blame*, and *Shame* too, if he miscarries. Therefore do not meddle with it, but be always careful to do that, which is both safe and honourable. Great Cures have been pretended to be done, only by giving Mercury *precipitatus per se*, to gr. j. iss. or gr. ij. in a Pill at Night for some Days at due Intervals, but I can say nothing to it from Experience, and am no Friend to dangerous Experiments, and have no great Faith in this Thing in particular ; but as I never try'd it, so I shall say no more about it.

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